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=> fil reg
FILE 'REGISTRY' ENTERED AT 14:57:15 ON 07 JUL 2006

=> d his ful

     FILE 'HCAPLUS' ENTERED AT 13:59:35 ON 07 JUL 2006
L1             1 SEA ABB=ON  US20050245755/PN
                 SEL RN

     FILE 'REGISTRY' ENTERED AT 13:59:49 ON 07 JUL 2006
L2             7 SEA ABB=ON  (10605-40-0/BI OR 1066-35-9/BI OR 107-05-1/
                 BI OR 12034-39-8/BI OR 13508-63-9/BI OR 298689-48-2/BI
                 OR 64-17-5/BI)

     FILE 'REGISTRY' ENTERED AT 14:20:06 ON 07 JUL 2006
L3               STR
L4             0 SEA SSS SAM L3
                 D QUE STAT L4
L5               STR L3
L6             0 SEA SSS SAM L5
                 D QUE STAT
L7            37 SEA SSS FUL L5
L8             1 SEA ABB=ON  L7 AND L2
                 SAV L7 NWA685/A

     FILE 'HCAPLUS' ENTERED AT 14:44:19 ON 07 JUL 2006
L9           185 SEA ABB=ON  L7
L10           47 SEA ABB=ON  L9 AND (ALKANOL? OR ALCOHOL? OR ?ANOL?)
L11            1 SEA ABB=ON  L10 AND L1
L12            2 SEA ABB=ON  L10 AND LEATHER?/SC,SX
L13           43 SEA ABB=ON  L10 AND (PROCESS? OR MAKING? OR SYNTHES?
                 OR PRODUC? OR PREP?)
L14           43 SEA ABB=ON  (L11 OR L12 OR L13)
L15           37 SEA ABB=ON  L14 AND (1840-2002)/PRY,AY,PY

     FILE 'CASREACT' ENTERED AT 14:53:01 ON 07 JUL 2006
L16              STR L5
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L18            8 SEA SSS FUL L16 (    22 REACTIONS)
                 SAV L18 NWA685A/A



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L5               STR
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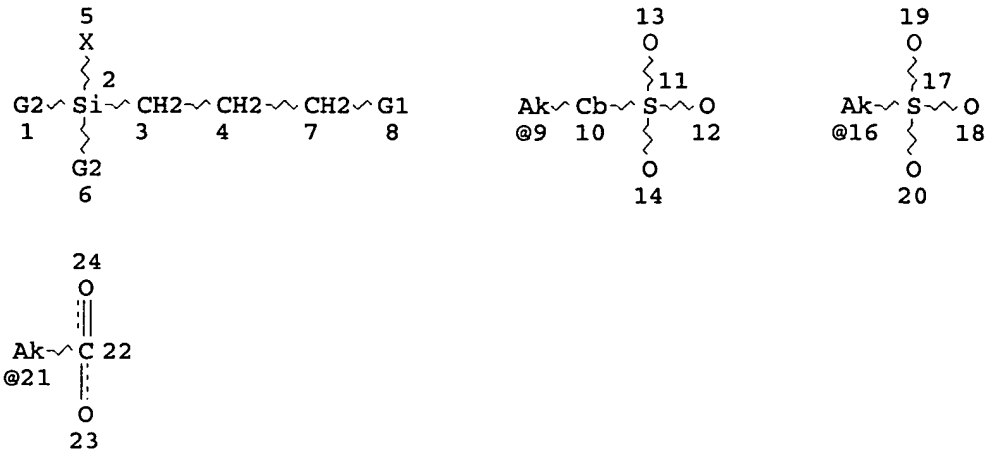

VAR G1=X/9/16/21
VAR G2=AK/CB
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 23

STEREO ATTRIBUTES: NONE

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                 OR ?ANOL?)
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L12            2 SEA FILE=HCAPLUS ABB=ON  L10 AND LEATHER?/SC,SX
L13           43 SEA FILE=HCAPLUS ABB=ON  L10 AND (PROCESS? OR MAKING?
                 OR SYNTHES? OR PRODUC? OR PREP?)
L14           43 SEA FILE=HCAPLUS ABB=ON  (L11 OR L12 OR L13)
L15           37 SEA FILE=HCAPLUS ABB=ON  L14 AND (1840-2002)/PRY,AY,PY
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FILE 'HCAPLUS' ENTERED AT 14:57:30 ON 07 JUL 2006
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L15 ANSWER 1 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:293419 HCAPLUS
DOCUMENT NUMBER: 140:304720
TITLE: **Production** of silsesquioxane derivative having functional group and silsesquioxane derivative
INVENTOR(S): Yoshida, Kazuhiro; Ito, Kenya; Oikawa, Hisao; Yamahiro, Mikio; Morimoto, Yoshitaka; Ohguma, Koji; Watanabe, Kenichi; Ootake, Nobumasa
PATENT ASSIGNEE(S): Chisso Corporation, Japan
SOURCE: U.S. Pat. Appl. Publ., 24 pp.

CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004068074	A1	20040408	US 2003-661536	2003 0915 <--
US 7053167	B2	20060530		
JP 2005015738	A2	20050120	JP 2003-190847	2003 0703 <--
US 2006089504	A1	20060427	US 2005-294364	2005 1206 <--

PRIORITY APPLN. INFO.:
JP 2002-268716 A 2002 0913 <--
JP 2003-123678 A 2003 0428
US 2003-661536 A1 2003 0915

OTHER SOURCE(S): MARPAT 140:304720
GI

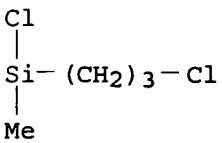
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB A conventional silsesquioxane derivative has the problems that the functional groups are restricted and the chemical structure is not readily controlled, and that it is expensive. This is a **process** for **producing** a silsesquioxane derivative at a high yield by a simple low cost **process.** The silsesquioxane derivative represented by II, is characterized by using a Si compound salt intermediate material represented by I. Where in I and II, R = H, alkyl, aryl and arylalkyl; M = monovalent alkaline metal atom; ≥1 of Y = -SiZR1R2, and the remainder of Y = H; R1 and R2 = R; and Z = a functional group.

IT **10605-40-0**, Chloro(3-chloropropyl)dimethylsilane (reaction with silsesquioxane salt; **production** of cage silsesquioxane derivative having functional group **making** use of salt intermediate)

RN 10605-40-0 HCAPLUS

CN Silane, chloro(3-chloropropyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM C08G077-00
INCL 528010000
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 29
IT Silsesquioxanes
(**production** of cage silsesquioxane derivative having functional group **making** use of salt intermediate)
IT 429-60-7, Trimethoxy-3,3,3-trifluoropropylsilane 2996-92-1, Phenyltrimethoxysilane 18395-30-7, Isobutyltrimethoxysilane 51851-37-7, Tridecafluoro-1,1,2,2-tetrahydrooctyltriethoxysilane 143487-47-2, Cyclopentyltrimethoxysilane
(condensation; **production** of cage silsesquioxane derivative having functional group **making** use of salt intermediate)
IT 656800-15-6P
(intermediate; **production** of cage silsesquioxane derivative having functional group **making** use of salt intermediate)
IT 465499-97-2P 656800-11-2P 656800-14-5P
(intermediate; **production** of cage silsesquioxane derivative having functional group **making** use of salt intermediate)
IT 676229-30-4P 676229-37-1P 676616-38-9P 676616-39-0P 676616-40-3P 676616-41-4P 676616-42-5P 676616-43-6P 676616-44-7P 676616-45-8P 676616-46-9P 676616-47-0P 676616-48-1P 676616-49-2P
(**production** of cage silsesquioxane derivative having functional group **making** use of salt intermediate)
IT 476635-00-4P
(**production** of cage silsesquioxane derivative having functional group **making** use of salt intermediate)
IT 106-92-3, Allyl glycidyl ether 111-45-5, 2-**Allyloxyethanol** 7539-12-0, Allylsuccinic anhydride 13752-97-1 23523-56-0
(reaction with H silsesquioxane; **production** of cage silsesquioxane derivative having functional group **making** use of salt intermediate)
IT 1066-35-9, Chlorodimethylsilane 1481-41-0, Chlorodimethyl(3,3,3-trifluoropropyl)silane 1631-82-9, Chloromethylphenylsilane 2227-29-4, Chlorodiisopropylsilane **10605-40-0**, Chloro(3-chloropropyl)dimethylsilane 24636-31-5
(reaction with silsesquioxane salt; **production** of cage silsesquioxane derivative having functional group **making** use of salt intermediate)
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 2 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:252523 HCAPLUS
DOCUMENT NUMBER: 140:272044

TITLE: Silsesquioxane derivative and **process** for **producing** the same
INVENTOR(S): Yoshida, Kazuhiro; Morimoto, Yoshitaka; Watanabe, Kenichi; Ootake, Nobumasa
PATENT ASSIGNEE(S): Chisso Corporation, Japan
SOURCE: PCT Int. Appl., 56 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004024741	A1	20040325	WO 2003-JP11277	20030903
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W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2003261916	A1	20040430	AU 2003-261916	20030903
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US 2006052623	A1	20060309	US 2005-527751	20051019
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PRIORITY APPLN. INFO.: JP 2002-268717 A 20020913
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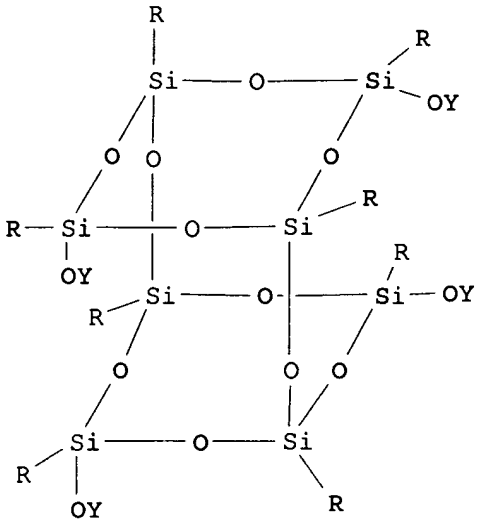
WO 2003-JP11277 W 20030903

OTHER SOURCE(S): MARPAT 140:272044
GI



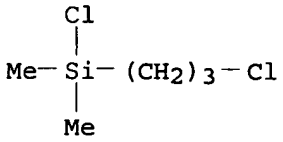
I

AB The present invention relates to (i) a silsesquioxane derivative I (PSQ derivative) which is for use as an electronic material, optical material, electrooptic material, or catalyst support and (ii) a **process** for **producing** the derivative, wherein R = H, alkyl, aryl, or arylalkyl; ≥1 of Ys = SiR1R2Z (the remainder of Ys = H); R1, R2 = independently H, alkyl, aryl, or arylalkyl; and Z = functional group or functional group-containing group. Conventional PSQ derivs. have a problem that they have poor compatibility with general organic polymers. The novel PSQ derivative has improved compatibility with general organic polymers. The **process** enables the derivative to be **produced** in a short time at low cost. It is utilizable as an additive for improving the flame retardancy, heat resistance, weatherability, light resistance, elec. insulating properties, surface properties, hardness, mech. strength, chemical resistance, and other properties of general organic polymers. Thus, phenyltrimethoxysilane 6.54, water 0.66, and sodium hydroxide 0:88 kg , and 2-Pr **alc.** 26.3 L were refluxed for 5 h to give a silsesquioxane derivative, 69 g of which was reacted with 80 g chlorodimethylsilane to give a hydrosilyl-containing silsesquioxane, 2.0 g the resulting hydrosilyl-containing silsesquioxane was reacted with 1.4 g allyl glycidyl ether to give a 2.5 g glycidyl group-containing silsesquioxane with number average mol. weight 1100 and weight average mol. weight 1170.

IT **10605-40-0**, 3-Chloropropyldimethylchlorosilane
(**preparation** of silsesquioxane derivs.)

RN 10605-40-0 HCAPLUS

CN Silane, chloro(3-chloropropyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM C07F007-21
CC 38-3 (Plastics Fabrication and Uses)
ST silsesquioxane deriv **prepn**; phenyltrimethoxysilane chlorodimethylsilane allyl glycidyl ether contg silsesquioxane **prepn**
IT Silsesquioxanes
(**preparation** of silsesquioxane derivs.)
IT 502925-52-2P
(intermediate; **preparation** of silsesquioxane derivs.)
IT 502925-53-3P
(model compound; **preparation** of silsesquioxane derivs.)
IT 674298-98-7P
(model compound; **preparation** of silsesquioxane derivs.)
IT 674298-99-8P 674299-00-4P 674299-01-5P 674299-02-6P 674299-03-7P 674299-04-8P
(**preparation** of silsesquioxane derivs.)
IT 106-92-3, Allyl glycidyl ether 111-45-5, 2-**Allyloxyethanol** 2996-92-1, Phenyltrimethoxysilane **10605-40-0**, 3-Chloropropyldimethylchlorosilane 23523-56-0, 4-Pentenoic acid trimethylsilyl ester 24636-31-5 70964-99-7
(**preparation** of silsesquioxane derivs.)
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 3 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:1007372 HCAPLUS
DOCUMENT NUMBER: 140:43774
TITLE: Method for **preparation** of organodialkylalkoxysilane
INVENTOR(S): Ramdani, Kamel; Vogin, Bernard
PATENT ASSIGNEE(S): Rhodia Chimie, Fr.; Rhone Poulenc Chimie
SOURCE: Fr. Demande, 30 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2841245	A1	20031226	FR 2002-7713	20020621
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FR 2841245	B1	20050218		
FR 2841244	A1	20031226	FR 2002-15114	20021202
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WO 2004000852 A1 20031231 WO 2003-FR1921
2003
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GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG,
KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK,
MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU,
SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG,
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PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN,
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AU 2003253076 A1 20040106 AU 2003-253076
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EP 1515977 A1 20050323 EP 2003-760774
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CN 1671719 A 20050921 CN 2003-818014
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EE, HU, SK
US 2005245755 A1 20051103 US 2005-518685
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PRIORITY APPLN. INFO.: FR 2002-7713 A
2002
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FR 2002-15114 A
2002
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EP 2003-760774 A3
2003
0623
WO 2003-FR1921 W
2003

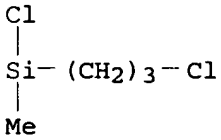
OTHER SOURCE(S): CASREACT 140:43774; MARPAT 140:43774

AB The **preparation** of organodialkylalkoxysilane is carried out by reactive distillation of an ω-haloalkyldialkylhalosilane in the presence of an **alkanol.** The stage of reactive distillation is implemented in a column in the presence or absence of nonreactive solvent with the removal of HCl byproduct. The ω-haloalkyldialkylalkoxysilane thus obtained is particularly useful as starting material for **preparation** of organosilicon compds. containing sulfur and having general formula R1OSiR2R3(CH2)3Sx(CH2)3SiR2R3OR1 by reaction of sulfurization on an alkaline metal polysulfide.

IT **10605-40-0P**, (3-Chloropropyl)dimethylchlorosilane
(method for **preparation** of organodialkylalkoxysilane)

RN 10605-40-0 HCAPLUS

CN Silane, chloro(3-chloropropyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM C07F007-18

CC 45-4 (Industrial Organic Chemicals, **Leather**, Fats, and Waxes)
Section cross-reference(s): 37

ST haloalkyldialkylhalosilane distn organodialkylalkoxysilane **prepn**

IT 298689-48-2P, Bis[3-(dimethylethoxysilylpropyl)] tetrasulfide
(method for **preparation** of organodialkylalkoxysilane)

IT 64-17-5, **Ethanol**, reactions 107-05-1, 3-Chloropropylene 1066-35-9, Dimethylchlorosilane 12034-39-8, Disodium tetrasulfide
(method for **preparation** of organodialkylalkoxysilane)

IT **10605-40-0P**, (3-Chloropropyl)dimethylchlorosilane 13508-63-9P
(method for **preparation** of organodialkylalkoxysilane)

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 4 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:837175 HCAPLUS

DOCUMENT NUMBER: 139:308748

TITLE: Polysulfide siloxane applicable as vulcanizing agent and method for **production** thereof

INVENTOR(S): Belin, Laure; Blanchard, Christiane

PATENT ASSIGNEE(S): Societe de Technologie Michelin, Fr.; Michelin Recherche et Technique S.A.

SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003087208	A1	20031023	WO 2003-EP3905	2003 0415
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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003227624	A1	20031027	AU 2003-227624	2003 0415
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
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AT 315608	E	20060215	AT 2003-725030	2003 0415
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US 2005090680	A1	20050428	US 2004-945813	2004 0921
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PRIORITY APPLN. INFO.:			FR 2002-4964 A	2002 0418
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			WO 2003-EP3905 W	2003 0415

OTHER SOURCE(S): MARPAT 139:308748

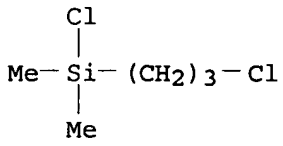
AB Polysulfide disiloxanes in which the Si atoms are bridged by ZSxZ groups (Z = divalent group, x > 2) are manufactured for use as vulcanizing agents providing vulcanizates with improved heat stability.

IT **10605-40-0**, 3-Chloropropyldimethylchlorosilane
(vulcanizing agent precursor; polysulfide disiloxanes

vulcanizing agents for vulcanizates with improved heat resistance)

RN 10605-40-0 HCAPLUS

CN Silane, chloro(3-chloropropyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM C08K005-00
ICS C08J003-00; C08L009-00; C07F007-08

CC 39-10 (Synthetic Elastomers and Natural Rubber)
Section cross-reference(s): 29

IT 13508-63-9DP, cyclic polysulfide derivs. 174476-90-5DP, 3-**Chloropropyldimethylsilanol**, cyclic polysulfide derivs.
(polysulfide disiloxanes vulcanizing agents for vulcanizates with improved heat resistance)

IT 13508-63-9P 174476-90-5P, 3-**Chloropropyldimethylsilanol**
(vulcanizing agent precursor; polysulfide disiloxanes vulcanizing agents for vulcanizates with improved heat resistance)

IT 64-17-5, **Ethanol**, reactions **10605-40-0**, 3-Chloropropyldimethylchlorosilane
(vulcanizing agent precursor; polysulfide disiloxanes vulcanizing agents for vulcanizates with improved heat resistance)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 5 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:805778 HCAPLUS
DOCUMENT NUMBER: 139:292355
TITLE: **Preparation** of silane coupling agent
INVENTOR(S): Yamaguchi, Kazuo; Ozaki, Atsushi
PATENT ASSIGNEE(S): Okamoto Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003292496	A2	20031015	JP 2002-100926 <--	2002 0403

PRIORITY APPLN. INFO.: JP 2002-100926 <-- 2002 0403

OTHER SOURCE(S): MARPAT 139:292355

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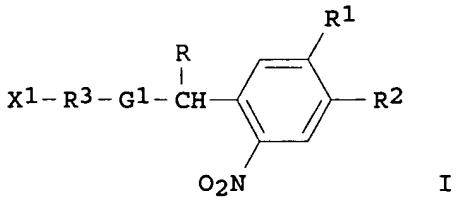

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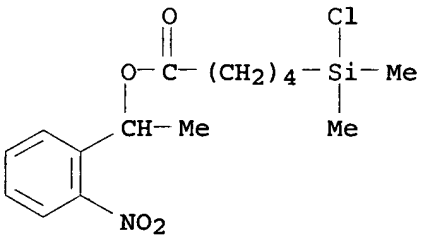
AB The patent relates to the **preparation** of nitrobenzyl alkoxysilyl derivs. I (G1 = O, COO; R1, R2 = H, methoxy etc.; R3 = methylene, alkylene etc.; X1 = trimethoxysilyl, triethoxysilyl; and R = H, alkyl etc.) as coupling agent useful for surface treatment of silicon wafer. Thus, 4,5-dimethoxy-2-nitrobenzyl 6-(trimethoxysilyl)hexyl ether **prepared** by reacting 5-hexenyl 4,5-dimethoxy-2-nitrobenzyl ether with trimethoxysilane was formulated in a composition comprising CST-70, CST-15, PSF2803, PSF2807, oil blue-613, and MEK to form a photo imaging solution which was coated on aluminum and gave pos. type picture after irradiation with mercury lamp at 365 nm.

IT **404353-10-2P**
(**preparation** of nitrobenzyl alkoxysilyl coupling agent)

RN 404353-10-2 HCAPLUS

CN Pentanoic acid, 5-(chlorodimethylsilyl)-, 1-(2-nitrophenyl)ethyl ester (9CI) (CA INDEX NAME)



IC ICM C07F007-18
ICS C08F008-42; C07F007-12

CC 29-6 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 42, 74, 76

ST nitrobenzyl alkoxysilyl deriv coupling agent **prepn**

IT Diazotization
Hydrosilylation
(in **preparation** of nitrobenzyl alkoxysilyl coupling agent)

IT Coupling agents
(**preparation** of nitrobenzyl alkoxysilyl coupling agent)

IT Silanes
(**preparation** of nitrobenzyl alkoxysilyl coupling agent)

IT 3958-60-9
(in **preparation** of nitrobenzyl alkoxysilyl coupling agent)

IT 1016-58-6P 3205-25-2P 3718-21-6P 5385-87-5P 39716-58-0P, 4-Pentenoyl chloride 85834-41-9P 114119-94-7P 123830-38-6P

264258-90-4P 404353-09-9P 404353-12-4P 609355-38-6P
609355-42-2P 609355-43-3P 609355-48-8P 609355-50-2P
609355-51-3P
(in **preparation** of nitrobenzyl alkoxysilyl coupling agent)
IT 404353-13-5P
(in **preparation** of nitrobenzyl alkoxysilyl coupling agent)
IT 107-18-6, "Allyl **alcohol**", reactions 302-01-2,
Hydrazine, reactions 591-80-0, 4-Pentenoic acid 614-21-1,
"2-Nitroacetophenone" 712-97-0 821-41-0, "5-Hexene-1-ol"
998-30-1, "Triethoxysilane" 1066-35-9, "Chlorodimethylsilane"
2487-90-3, "Trimethoxysilane" 10025-78-2, "Trichlorosilane"
13019-22-2, "9-Decen-1-ol" 20357-25-9 38460-95-6,
10-Undecenoyl chloride 53169-26-9, "Chlorothionyl" 609355-44-4
(in **preparation** of silane coupling agent)
IT 609355-36-4P 609355-37-5P
(in **preparation** of silane coupling agent)
IT **404353-10-2P** 404353-11-3P 404353-15-7P 404353-16-8P
609355-39-7P 609355-40-0P 609355-41-1P 609355-45-5P
609355-46-6P 609355-47-7P 609355-49-9P
(**preparation** of nitrobenzyl alkoxysilyl coupling agent)

L15 ANSWER 6 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:454333 HCAPLUS
DOCUMENT NUMBER: 139:22334
TITLE: Method for obtaining bis(monoorganoxysilylpropyl) polysulfides
INVENTOR(S): Guennouni, Nathalie; Pevere, Virginie; Vogin, Bernard
PATENT ASSIGNEE(S): Rhodia Chimie, Fr.
SOURCE: PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003048169	A1	20030612	WO 2002-FR4204	2002 1206

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W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
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FR 2833264	A1	20030613	FR 2001-15768	2001 1206

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FR 2833264	B1	20050819		

FR 2833265 A1 20030613 FR 2002-10145
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AU 2002364429 A1 20030617 AU 2002-364429
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EP 1461344 A1 20040929 EP 2002-799785
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, CY, TR, BG, CZ, EE, SK
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FR 2002-10145 A
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EP 2002-799785 A3
2002
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WO 2002-FR4204 W
2002
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OTHER SOURCE(S): CASREACT 139:22334; MARPAT 139:22334

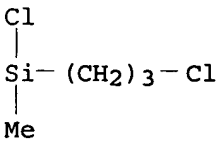
AB The invention concerns the **preparation** of bis(monoorganooxysilylpropyl) polysulfides R1OSiR2R3(CH2)3-Sx-(CH2)3SiR2R3OR1 (I, R1 = C1-C15 alkyl, alkoxyalkyl; R2 and R3 = C1-C6 alkyl and/or phenyl; 1.5 ±.1 ≤ x ≤ 5 ±0.1). Said **preparation** is carried out by performing successively the following steps (a), (b) and (c): (a) hydrosilylation of the type: R2R3HSi-Hal + CH2:CH-CH2-Hal → Hal-R2R3Si-(CH2)3Hal; (b) **alcoholysis** of the type: Hal-R2R3Si-(CH2)3-Hal + R1OH → R1O-R2R3Si-(CH2)3Hal; (c) sulfidization of the type: R1O-R2R3Si-(CH2)3Hal + M2Sx → compound I; with Hal = halogen atom and M = alkali metal. Variations of the above reaction are also included in the invention. Thus, reaction of Me2HSiCl with CH2:CHCH2Cl in the presence of [Ir(COD)Cl]2 (COD = 1,5-cyclooctadiene) as catalyst afforded ClSiMe2(CH2)3Cl (85% yield), which reacted with **ethanol** to give EtOSiMe2(CH2)3Cl (96% yield). Finally, reaction of the latter with Na2S4 afforded

bis(monoorganooxysilylpropyl) tetrasulfide, EtOSiMe2(CH2)3-S4-(CH2)3SiMe2OEt (87% yield).

IT **10605-40-0P**
(intermediate; for **preparation** of bis(monoethoxysilylpropyl) tetrasulfide)

RN 10605-40-0 HCAPLUS

CN Silane, chloro(3-chloropropyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM C07F007-18
ICS C07F007-12; C07F007-14

CC 29-6 (Organometallic and Organometalloidal Compounds)

ST polysulfide monoorganooxysilylpropyl **prepn**; hydrosilylation catalyst transition metal element compd allyl halide alkoxysilane

IT Polysulfides
(**preparation** of bis(monoorganoxysilylpropyl) polysulfides)

IT Hydrosilylation catalysts
(transition metals and their compds. and complexes as catalysts for hydrosilylation of allyl halide with alkoxysilanes, in **preparation** of bis(monoorganoxysilylpropyl) polysulfides)

IT 12112-67-3, Chloro(1,5-cyclooctadiene)iridium dimer
(catalyst for hydrosilylation of allyl halide with alkoxysilanes, in **preparation** of bis(monoorganoxysilylpropyl) polysulfides)

IT 64-17-5, **Ethanol**, reactions 107-05-1, Allyl chloride 1066-35-9, Chlorodimethylsilane
(for **preparation** of bis(monoethoxysilylpropyl) tetrasulfide)

IT 12034-39-8P, Disodium tetrasulfide
(for **preparation** of bis(monoethoxysilylpropyl) tetrasulfide)

IT **10605-40-0P** 13508-63-9P
(intermediate; for **preparation** of bis(monoethoxysilylpropyl) tetrasulfide)

IT 298689-48-2P
(**preparation** of)

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 7 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:863865 HCAPLUS

DOCUMENT NUMBER: 139:69303

TITLE: **Product** subclass 42: γ-silyl alkyl halides, **alcohols**, and esters thereof

AUTHOR(S): Michael, J. P.; de Koning, C. B.

CORPORATE SOURCE: Molecular Science Institute, School of Chemistry, University of Witwatersrand, Johannesburg, 2050, S. Afr.

SOURCE: Science of Synthesis (**2002**), 4,

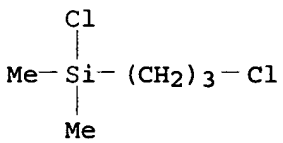
947-971
CODEN: SSCYJ9
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review describes various methods for the **synthesis** of γ-silyl alkyl halides, alcs., and esters, and their applications. The methods described include the **synthesis** from silyl anions and functionalized three-carbon electrophiles; from silicon electrophiles and functionalized three-carbon nucleophiles; from α-silylated carbanions and epoxides; hydrosilylation of allylic compds.; coupling between vinylsilanes and aldehydes or ketones; addns. of allylsilanes; addition of β-silylated carbanions to aldehydes and ketones; and other miscellaneous methods.

IT **10605-40-0P**
(**preparation** of γ-silyl alkyl halides, alcs., and esters via hydrosilylation of allylic compound)

RN 10605-40-0 HCAPLUS

CN Silane, chloro(3-chloropropyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



CC 29-0 (Organometallic and Organometalloidal Compounds)

ST review gamma silyl alkyl halide **alc** ester **synthesis**; alkoxy silane retro Brook rearrangement review; allylic compd hydrosilylation review; vinyl silane aldehyde ketone coupling review; allyl silane hydrometalation oxidn review; radical addn allyl silane review; silyl enolate carbonyl compd condensation review

IT Rearrangement
(Brook, retro; **preparation** of γ-silyl alkyl halides, alcs., and esters via retro-[1,4]-Brook rearrangement)

IT Addition reaction
(allylboration; **preparation** of γ-silyl alkyl halides, alcs., and esters via allylboration-oxidation of allylsilanes)

IT Addition reaction
(homolytic; **preparation** of γ-silyl alkyl halides, alcs., and esters via free-radical addition to allylsilanes)

IT Condensation reaction
(**preparation** of γ-silyl alkyl halides, alcs., and esters via condensation of β-silyl enolates with carbonyl compound)

IT Coupling reaction
(**preparation** of γ-silyl alkyl halides, alcs., and esters via coupling between vinylsilanes and aldehydes or ketones)

IT Hydrometalation
Oxidation
(**preparation** of γ-silyl alkyl halides, alcs., and esters via hydrometalation-oxidation of allylsilanes)

IT Hydrosilylation

(**preparation** of γ-silyl alkyl halides, alcs., and esters via hydrosilylation of allylic compound)

IT 98-60-2 763-13-3 1950-69-2 67957-50-0
(**preparation** of γ-silyl alkyl halides and alcs. from homoallylsilanes)

IT 18387-24-1P 67957-52-2P 210572-56-8P 210572-64-8P
(**preparation** of γ-silyl alkyl halides and alcs. from homoallylsilanes)

IT 18178-57-9 67957-95-3 75311-61-4
(**preparation** of γ-silyl alkyl halides via cleavage of silylcyclopropanes with acidic reagents)

IT 77508-38-4P 77508-44-2P 93297-66-6P 120347-42-4P
120347-49-1P 551939-66-3P
(**preparation** of γ-silyl alkyl halides via cleavage of silylcyclopropanes with acidic reagents)

IT 75-77-4, reactions 627-30-5 2203-35-2 14947-48-9,
1,3-Dithiane-2-**ethanol** 27607-77-8 53178-47-5
63823-55-2
(**preparation** of γ-silyl alkyl halides, alcs., and esters from silicon electrophiles and functionalized three-carbon electrophiles)

IT 2917-47-7P 52214-11-6P 94142-02-6P 124764-28-9P
129178-72-9P
(**preparation** of γ-silyl alkyl halides, alcs., and esters from silicon electrophiles and functionalized three-carbon electrophiles)

IT 94-41-7 503-30-0, Oxetane 930-68-7, 2-Cyclohexen-1-one
3839-31-4 32892-18-5 183729-68-2
(**preparation** of γ-silyl alkyl halides, alcs., and esters from silyl anions and functionalized three-carbon electrophiles)

IT 7452-98-4P 7452-99-5P 68469-62-5P 183729-69-3P
191916-53-7P 551939-22-1P
(**preparation** of γ-silyl alkyl halides, alcs., and esters from silyl anions and functionalized three-carbon electrophiles)

IT 75-21-8, Oxirane, reactions 75-56-9, reactions 185-70-6,
1-Oxaspiro[2.5]octane 286-20-4, 7-Oxabicyclo[4.1.0]heptane
762-72-1 1758-33-4 13683-41-5 17891-78-0 20780-53-4
123463-20-7 148259-36-3 159956-88-4
(**preparation** of γ-silyl alkyl halides, alcs., and esters from α-silylated carbanions and epoxides)

IT 86486-85-3P 103681-21-6P 144712-73-2P 159956-90-8P
174224-93-2P 551939-37-8P 551939-39-0P 551939-40-3P
551939-41-4P 551939-42-5P 551939-43-6P 551939-44-7P
551939-45-8P
(**preparation** of γ-silyl alkyl halides, alcs., and esters from α-silylated carbanions and epoxides)

IT 100-52-7, Benzaldehyde, reactions 123-19-3, 4-Heptanone
123-72-8, Butanal 700-58-3, Tricyclo[3.3.1.13,7]decanone
18156-67-7 104107-85-9 124853-60-7 164801-59-6
(**preparation** of γ-silyl alkyl halides, alcs., and esters via addition of β-silyl organometallic reagents to aldehydes or ketones)

IT 81372-27-2P 164801-60-9P 190380-95-1P 190380-97-3P
190381-00-1P 190381-02-3P 551939-62-9P
(**preparation** of γ-silyl alkyl halides, alcs., and esters via addition of β-silyl organometallic reagents to aldehydes or ketones)

IT 1113-12-8 10519-88-7 14579-08-9 24400-84-8 40934-71-2

184172-56-3 184172-57-4 551939-55-0
(**preparation** of γ-silyl alkyl halides, alcs., and esters via allylboration-oxidation of allylsilanes)

IT 144930-15-4P 177594-75-1P 184172-60-9P 184172-61-0P
184172-63-2P 184172-66-5P 184172-67-6P 184172-68-7P
551939-56-1P
(**preparation** of γ-silyl alkyl halides, alcs., and esters via allylboration-oxidation of allylsilanes)

IT 75-07-0, Acetaldehyde, reactions 18707-60-3 104085-59-8
114431-81-1
(**preparation** of γ-silyl alkyl halides, alcs., and esters via condensation of β-silyl enolates with carbonyl compound)

IT 104085-53-2P 104085-54-3P 104085-55-4P 104085-56-5P
104113-42-0P 104113-43-1P 104113-44-2P 104113-46-4P
146759-32-2P 146759-33-3P
(**preparation** of γ-silyl alkyl halides, alcs., and esters via condensation of β-silyl enolates with carbonyl compound)

IT 67-64-1, 2-Propanone, reactions 78-93-3, 2-Butanone, reactions
96-22-0, 3-Pentanone 98-86-2, reactions 108-94-1,
Cyclohexanone, reactions 120-92-3, Cyclopentanone 754-05-2
927-49-1, 6-Undecanone 2550-26-7 60484-87-9 66535-64-6
101933-91-9 168282-42-6
(**preparation** of γ-silyl alkyl halides, alcs., and esters via coupling between vinylsilanes and aldehydes or ketones)

IT 17888-67-4P 18410-35-0P 81372-29-4P 113386-95-1P
125153-14-2P 158722-97-5P 158723-00-3P 168282-34-6P
168282-41-5P 182947-90-6P 551939-53-8P
(**preparation** of γ-silyl alkyl halides, alcs., and esters via coupling between vinylsilanes and aldehydes or ketones)

IT 3651-23-8 166970-54-3
(**preparation** of γ-silyl alkyl halides, alcs., and esters via free-radical addition to allylsilanes)

IT 123331-54-4P 166970-55-4P
(**preparation** of γ-silyl alkyl halides, alcs., and esters via free-radical addition to allylsilanes)

IT 29886-50-8 79753-70-1 97946-04-8 100312-73-0 106621-06-1
146758-80-7
(**preparation** of γ-silyl alkyl halides, alcs., and esters via hydrometalation-oxidation of allylsilanes)

IT 54040-91-4P 120196-04-5P 120196-05-6P 120196-19-2P
120196-20-5P 146759-02-6P 146862-95-5P 551939-54-9P
(**preparation** of γ-silyl alkyl halides, alcs., and esters via hydrometalation-oxidation of allylsilanes)

IT 75-36-5, Acetyl chloride 75-54-7 96-05-9 98-88-4, Benzoyl chloride 106-95-6, reactions 107-05-1 107-18-6,
2-Propen-1-ol, reactions 563-47-3 563-52-0 591-87-7
998-30-1 999-55-3 1066-35-9 1438-82-0 1631-70-5
1631-84-1 3282-30-2 10025-78-2 14857-34-2 18146-00-4
58210-84-7 138924-51-3 139016-94-7 139016-95-8 139016-97-0
139017-00-8 551939-46-9
(**preparation** of γ-silyl alkyl halides, alcs., and esters via hydrosilylation of allylic compound)

IT 1000-58-4P 1591-20-4P 1628-11-1P 2550-06-3P 3401-26-1P
5089-70-3P 5290-24-4P 7787-93-1P **10605-40-0P**
13883-39-1P 18142-53-5P 18209-82-0P 18301-56-9P
18387-98-9P 37611-45-3P 38595-89-0P 42496-16-2P

58210-63-2P 61676-44-6P 551939-47-0P 551939-48-1P
551939-49-2P 551939-50-5P 551939-51-6P 551939-52-7P
551939-67-4P 551939-68-5P
(**preparation** of γ-silyl alkyl halides, alcs., and esters via hydrosilylation of allylic compound)

IT 18171-15-8 18244-07-0 141412-20-6 190523-14-9 198646-26-3
198646-27-4 198646-30-9 198646-31-0 551939-24-3
551939-25-4 551939-28-7
(**preparation** of γ-silyl alkyl halides, alcs., and esters via retro-[1,4]-Brook rearrangement)

IT 18387-35-4P 141437-79-8P 150845-21-9P 150845-22-0P
163123-02-2P 163123-13-5P 198646-19-4P 198646-20-7P
198646-34-3P 551939-23-2P 551939-26-5P 551939-27-6P
(**preparation** of γ-silyl alkyl halides, alcs., and esters via retro-[1,4]-Brook rearrangement)

IT 78-79-5, reactions 110-62-3, Pentanal 995-45-9 2288-18-8
87436-97-3
(**preparation** of γ-silyl alkyl halides, alcs., and esters via silylmetalation of dienes followed by addition to carbonyl compound)

IT 81906-08-3P 133447-98-0P 133447-99-1P 133448-00-7P
133448-01-8P 133448-06-3P 187098-09-5P 187098-12-0P
551939-65-2P
(**preparation** of γ-silyl alkyl halides, alcs., and esters via silylmetalation of dienes followed by addition to carbonyl compound)

REFERENCE COUNT: 118 THERE ARE 118 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 8 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:658673 HCAPLUS
DOCUMENT NUMBER: 137:165805
TITLE: Low fluorescence nylon/glass composites for micro-analytical diagnostic applications
INVENTOR(S): Andreoli, Rita; Amin, Murtaza; Meyering, Mark; Chesterson, Richard; Ostreicher, Eugene
PATENT ASSIGNEE(S): Cuno Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 21 pp., Cont.-in-part of U.S. Provisional Ser. No. 224,141.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 8
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002119559	A1	20020829	US 2001-899607 <--	2001 0705
US 6734012	B2	20040511		
US 2004157320	A1	20040812	US 2004-772645 <--	2004 0205
PRIORITY APPLN. INFO.:			US 2000-216229P P	2000

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US 2000-216390P P
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US 2000-224141P P
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US 2001-899607 A3
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0705
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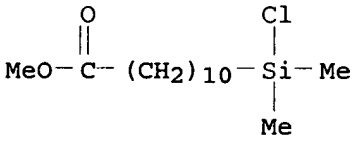
AB An improved combination non-luminescent microporous membrane and solid support for use in micro-anal. diagnostic applications is disclosed. Specifically, a multi-cell non-luminescent substrate having a porous membrane formed by a phase inversion **process** effectively attached by covalent bonding through a surface treatment to a substrate that **preps.** the substrate to sufficiently, covalently bond to the non-luminescent microporous membrane formed by a phase inversion **process** such that the combination **produced** thereby is useful in microarray applications and wherein the porous non-luminescent nylon multi-cell substrate is covalently bonded to a solid base member, such as, for example, a glass or Mylar microscope slide, such that the combination **produced** thereby is useful in microarray applications. Apparatus and methods for fabricating the non-luminescent multi-cell substrate are also disclosed.

IT **53749-38-5**, (10-Carbomethoxydecyl)dimethylchlorosilane
(improved low fluorescence nylon/glass composites for micro-anal. diagnostic applications)

RN 53749-38-5 HCAPLUS

CN Undecanoic acid, 11-(chlorodimethylsilyl)-, methyl ester (9CI) (CA INDEX NAME)



IC ICM C12M001-34
ICS B05D003-00

INCL 435287200

CC 9-1 (Biochemical Methods)
Section cross-reference(s): 35, 47

IT 64-17-5, **Ethanol**, uses 67-56-1, **Methanol**, uses 112-57-2, Tetraethylenepentamine 7732-18-5, Water, uses
(improved low fluorescence nylon/glass composites for micro-anal. diagnostic applications)

IT 64-18-6, Formic acid, reactions 106-89-8D, Epichlorohydrin, reaction **products** with polyamide-polyamines 919-30-2, 3-Aminopropyl triethoxysilane 1760-24-3, N-(2-Aminoethyl)-3-aminopropyl trimethoxysilane 2530-83-8, 3-Glycidoxypropyltrimethoxysilane 3388-04-3, 2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane **53749-38-5**, (10-Carbomethoxydecyl)dimethylchlorosilane

(improved low fluorescence nylon/glass composites for micro-anal. diagnostic applications)
REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 9 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:293753 HCAPLUS
DOCUMENT NUMBER: 136:311081
TITLE: Rubber composition comprising, as coupling agent, a polyfunctional organosilane
INVENTOR(S): Tardivat, Jean-Claude; Pagano, Salvatore
PATENT ASSIGNEE(S): Societe De Technologie Michelin, Fr.; Michelin Recherche Et Technique S.A.
SOURCE: PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002031041	A1	20020418	WO 2001-EP11669	2001 1009
			<--	
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2425330	AA	20020418	CA 2001-2425330	2001 1009
			<--	
AU 2002023607	A5	20020422	AU 2002-23607	2001 1009
			<--	
EP 1326914	A1	20030716	EP 2001-986704	2001 1009
			<--	
EP 1326914	B1	20060621		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2001014614	A	20031223	BR 2001-14614	2001 1009
			<--	
JP 2004511601	T2	20040415	JP 2002-534417	2001 1009

				<--	
US 2004051210	A1	20040318	US 2003-411615		
					2003
					0410
				<--	
PRIORITY APPLN. INFO.:			FR 2000-13255	A	
					2000
					1013
				<--	
			WO 2001-EP11669	W	
					2001
					1009
				<--	

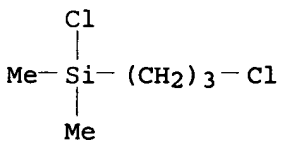
OTHER SOURCE(S): MARPAT 136:311081

AB The invention concerns an elastomeric composition based on at least a diene elastomer, an inorg. filler as reinforcing filler, a polyfunctional organosilane as coupling agent (inorg. filler/diene elastomer), bearing at least two functions designated X and Y , capable of being grafted on the elastomer by function X and on the inorg. filler by function Y. The invention is characterized in that said function Y is a hydroxysilyl function. Preferably, said organosilane is a hydroxysilane polysulfide, the diene elastomer is selected in the group consisting of polybutadiene, natural rubber, synthetic polyisoprene, butadiene copolymers, isoprene copolymers, and the reinforcing inorg. filler is a highly dispersible silicious filler. The compns. containing these silanes exhibit improved scorching properties and green-state **processability.** The invention also concerns tires or semi-finished **products** for tires, in particular running treads for tires comprising the inventive composition A typical coupling agent was manufactured by reaction of ClSiMe2(CH2)3Cl (I) with EtOH in the presence of NEt3 and reaction of the resulting EtOSiMe2(CH2)3Cl with (1) MeOH/aqueous NaOH, (2) aqueous KH2PO4, and (3) ether or by reaction of I with NEt3, H2O, ET2O and reaction of the resulting HOSiMe2(CH2)3Cl with Na2Sx in the presence of H2O, NaCl, PhMe, and a phase-transfer catalyst.

IT **10605-40-0**, 3-Chloropropyldimethylchlorosilane
(coupling agent precursor; rubber compns. containing hydroxysilyl polysulfide coupling agents for silica in tires)

RN 10605-40-0 HCAPLUS

CN Silane, chloro(3-chloropropyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM C08K005-548
ICS C08L021-00

CC 39-13 (Synthetic Elastomers and Natural Rubber)

IT 64-17-5, **Ethanol**, reactions **10605-40-0**, 3-Chloropropyldimethylchlorosilane
(coupling agent precursor; rubber compns. containing hydroxysilyl polysulfide coupling agents for silica in tires)

IT 1344-08-7DP, Sodium polysulfide, reaction **products** with chloropropyldimethylhydroxysilane 174476-90-5DP, reaction

products with sodium polysulfide
(rubber compns. containing hydroxysilyl polysulfide coupling agents for silica in tires)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 10 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:293661 HCAPLUS
DOCUMENT NUMBER: 136:311046
TITLE: Polyfunctional organosilanes for use as coupling agent for diene rubber
INVENTOR(S): Tardivat, Jean-Claude; Belin, Laure; Blanchard, Christine
PATENT ASSIGNEE(S): Societe De Technologie Michelin, Fr.; Michelin Recherche Et Technique S.A.
SOURCE: PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002030939	A1	20020418	WO 2001-EP11668	2001 1009
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2425300	AA	20020418	CA 2001-2425300	2001 1009
AU 2002016955	A5	20020422	AU 2002-16955	2001 1009
EP 1326871	A1	20030716	EP 2001-986691	2001 1009
EP 1326871	B1	20060201		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2001014616	A	20031223	BR 2001-14616	2001 1009
JP 2004520272	T2	20040708	JP 2002-534324	

					2001 1009 <--
AT 316973	E	20060215	AT 2001-986691		2001 1009 <--
RU 2272042	C2	20060320	RU 2003-113527		2001 1009 <--
US 6774255	B1	20040810	US 2003-411616		2003 0410 <--
PRIORITY APPLN. INFO.:			FR 2000-13254	A	2000 1013 <--
			WO 2001-EP11668	W	2001 1009 <--

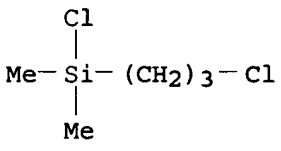
OTHER SOURCE(S): MARPAT 136:311046

AB The invention concerns monohydroxysilane polysulfide, HOSiR2(R'SxR')SiR2OH, wherein: the radicals R, identical or different, are hydrocarbon groups comprising preferably 1 to 15 C atoms; the radicals R', identical or different, are divalent binding groups preferably comprising 1 to 18 C atoms; x is ≥2. Said hydroxysilane is in particular a bis(**propyldimethylsilanol**) sulfide. The method for obtaining said hydroxysilane consists in subjecting to **alcoholysis** and/or hydrolysis a halogenated organosilane, followed by a sulfidizing step. For example, ClSiMe2(CH2)3Cl was either converted to EtOSiMe2(CH2)3Cl (EtOH/Et3N) and then sequentially treated with (1) MeOH/NaOHaq, (2) KH2PO4aq and (3) Et2O to give HOSiMe2(CH2)3Cl or treated with Et3N/H2O/Et2O to give HOSiMe2(CH2)3Cl, which was then reacted with Na2Sx/H2O/NaCl/toluene/Bu4NBr to give HOSiMe2(CH2)3Sx(CH2)3SiMe2OH (x = 2-6 with average value ≈3.7). The invention also concerns the use of said hydroxysilane as coupling agent.

IT **10605-40-0**, Chloro(3-chloropropyl)dimethylsilane (for **preparation** of hydroxysilane polysulfides useful as coupling agents for diene elastomers)

RN 10605-40-0 HCAPLUS

CN Silane, chloro(3-chloropropyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM C07F007-08
ICS C08K005-31; C08K005-548

CC 39-2 (Synthetic Elastomers and Natural Rubber)
Section cross-reference(s): 29

ST hydroxysilane polysulfide **prepn** use coupling agent SBR; **silanol** polysulfide coupling agent butyl rubber
IT Polysulfides
Silanes
(monohydroxysilane polysulfides; **preparation** for use as coupling agents for diene elastomers)
IT Butyl rubber, properties
(monohydroxysilane polysulfides; **preparation** for use as coupling agents for diene elastomers)
IT Styrene-butadiene rubber, properties
(monohydroxysilane polysulfides; **preparation** for use as coupling agents for diene elastomers)
IT Coupling agents
(**preparation** of hydroxysilane polysulfides for diene elastomers)
IT 9010-85-9
(butyl rubber, monohydroxysilane polysulfides; **preparation** for use as coupling agents for diene elastomers)
IT 7631-86-9, Zeosil 1165MP, uses
(for **preparation** of hydroxysilane polysulfides useful as coupling agents for diene elastomers)
IT **10605-40-0**, Chloro(3-chloropropyl)dimethylsilane
(for **preparation** of hydroxysilane polysulfides useful as coupling agents for diene elastomers)
IT 13508-63-9P, (3-Chloropropyl)(ethoxy)dimethylsilane
174476-90-5P, (3-Chloropropyl)**dimethylsilanol**
(intermediate; for **preparation** of hydroxysilane polysulfides useful as coupling agents for diene elastomers)
IT 411223-82-0P, Bis(3-(hydroxydimethylsilyl)propyl) disulfide
411223-83-1P, Bis(3-(hydroxydimethylsilyl)propyl) trisulfide
411223-84-2P, Bis(3-(hydroxydimethylsilyl)propyl) tetrasulfide
411223-85-3P, Bis(3-(hydroxydimethylsilyl)propyl) pentasulfide
411223-86-4P
(**preparation** for use as coupling agents for diene elastomers)
IT 9003-55-8
(styrene-butadiene rubber, monohydroxysilane polysulfides; **preparation** for use as coupling agents for diene elastomers)
REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 11 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:205086 HCAPLUS
DOCUMENT NUMBER: 136:247695
TITLE: Nitrobenzyl group-containing chlorosilanes as coupling agents, and introduction of carboxy or hydroxy group to material surfaces using them
INVENTOR(S): Yamaguchi, Kazuo; Futami, Tatsuhiro
PATENT ASSIGNEE(S): Okamoto Kagaku Kogyo K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

JP 2002080481 A2 20020319 JP 2000-269904 2000 0906 <--

PRIORITY APPLN. INFO.: JP 2000-269904 2000 0906 <--

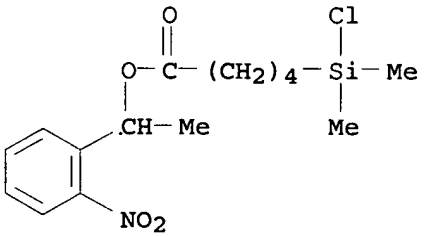
OTHER SOURCE(S): MARPAT 136:247695

AB The compds. have SiClMe2, SiCl2Me, or SiCl3 at one terminal and (α-substituted) p-nitrobenzyloxy group at the other terminal. 1-(2-Nitrophenyl)ethyl 4-pentenoate (**preparation** given) was hydrosilylated by HSiCl3 in the presence of H2PtCl6 to give 79% Cl3Si(CH2)4CO2CHMeC6H4NO2-o (I). A Si wafer was treated with C6H6 solution of I and irradiated by UV to give a surface-modified wafer with high contact angle.

IT **404353-10-2P**
(**preparation** of nitrobenzyl group-containing silane coupling agents)

RN 404353-10-2 HCAPLUS

CN Pentanoic acid, 5-(chlorodimethylsilyl)-, 1-(2-nitrophenyl)ethyl ester (9CI) (CA INDEX NAME)



IC ICM C07F007-08
ICS C07F007-08; C09C003-12

CC 29-6 (Organometallic and Organometalloidal Compounds)

IT Coupling agents
(**preparation** of nitrobenzyl group-containing silane coupling agents)

IT **404353-10-2P** 404353-11-3P 404353-15-7P 404353-16-8P
(**preparation** of nitrobenzyl group-containing silane coupling agents)

IT 552-89-6, 2-Nitrobenzaldehyde 591-80-0, 4-Pentenoic acid 614-21-1, 2-Nitroacetophenone 821-41-0, 5-Hexen-1-ol 1066-35-9, Chlorodimethylsilane 3958-60-9, 2-Nitrobenzyl bromide 10025-78-2, Trichlorosilane 13019-22-2, 9-Decen-1-ol
(**preparation** of nitrobenzyl group-containing silane coupling agents)

IT 3205-25-2P, 1-(2-Nitrophenyl)**ethanol** 3718-21-6P 5385-87-5P 39716-58-0P, 4-Pentenoic acid chloride 85834-41-9P 116271-34-2P 264258-90-4P 404353-09-9P 404353-12-4P 404353-13-5P 404353-14-6P
(**preparation** of nitrobenzyl group-containing silane coupling agents)

IT 7440-21-3, Silicon, **processes**
(wafer; **preparation** of nitrobenzyl group-containing silane coupling agents for)

L15 ANSWER 12 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:31474 HCAPLUS
DOCUMENT NUMBER: 136:82254
TITLE: Improved low fluorescence nylon/glass composites for micro-analytical diagnostic applications
INVENTOR(S): Andreoli, Rita; Amin, Murtaza; Myering, Mark; Chesterton, Richard; Ostreicher, Eugene
PATENT ASSIGNEE(S): Cuno, Inc., USA
SOURCE: PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 8
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002002585	A2	20020110	WO 2001-US21262	2001 0705 <--
WO 2002002585	A3	20021003		
W: AU, BR, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
EP 1297340	A2	20030402	EP 2001-950882	2001 0705 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
JP 2004502928	T2	20040129	JP 2002-507837	2001 0705 <--
BR 2001006969	A	20040713	BR 2001-6969	2001 0705 <--
AU 780441	B2	20050324	AU 2001-71835	2001 0705 <--

PRIORITY APPLN. INFO.:		
US 2000-216229P	P	2000 0705 <--
US 2000-216390P	P	2000 0706 <--
US 2000-224141P	P	2000 0810 <--
WO 2001-US21262	W	2001

0705

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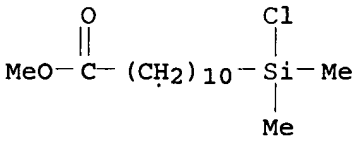
AB An improved combination non-luminescent microporous membrane and solid support for use in micro-anal. diagnostic applications is disclosed. Specifically, a multi-cell non-luminescent substrate having a porous membrane formed by a phase inversion **process** effectively attached by covalent bonding through a surface treatment to a substrate that **preps.** the substrate to sufficiently, covalently bond to the non-luminescent microporous membrane formed by a phase inversion **process** such that the combination **produced** thereby is useful in microarray applications and wherein the porous non-luminescent nylon multi-cell substrate is covalently bonded to a solid base member, such as, for example, a glass or Mylar microscope slide, such that the combination **produced** thereby is useful in microarray applications. Apparatus and methods for fabricating the non-luminescent multi-cell substrate are also disclosed. A carbon black-impregnated nylon membrane was cast and then permanently attached to a glass slide to form a composite.

IT **53749-38-5**, (10-Carbomethoxydecyl)dimethylchlorosilane (improved low fluorescence nylon/glass composites for micro-anal. diagnostic applications)

RN 53749-38-5 HCAPLUS

CN Undecanoic acid, 11-(chlorodimethylsilyl)-, methyl ester (9CI) (CA INDEX NAME)



IC ICM C07H021-00

CC 9-1 (Biochemical Methods)
Section cross-reference(s): 35, 47

IT 64-17-5, **Ethanol**, uses 67-56-1, **Methanol**, uses 112-57-2, Tetraethylenepentamine 7732-18-5, Water, uses (improved low fluorescence nylon/glass composites for micro-anal. diagnostic applications)

IT 64-18-6, Formic acid, reactions 106-89-8D, Epichlorohydrin, reaction **products** with polyamide-polyamines 919-30-2, 3-Aminopropyl triethoxysilane 1760-24-3, N-(2-Aminoethyl)-3-aminopropyl trimethoxysilane 2530-83-8, 3-Glycidoxypropyltrimethoxysilane 3388-04-3, 2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane **53749-38-5**, (10-Carbomethoxydecyl)dimethylchlorosilane (improved low fluorescence nylon/glass composites for micro-anal. diagnostic applications)

L15 ANSWER 13 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:832173 HCAPLUS

DOCUMENT NUMBER: 136:111860

TITLE: Immobilization of difunctional building blocks on hydroxysuccinimide activated silica: versatile in situ **preparation** of chiral stationary phases

AUTHOR(S): Kosjek, Birgit; Uray, Georg

CORPORATE SOURCE: Institut fur Chemie, Karl-Franzens Universitat

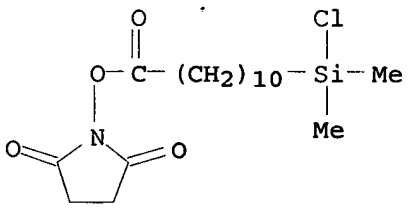
Graz, Graz, 8010, Austria
SOURCE: Chirality (2001), 13(10), 657-667
CODEN: CHRLEP; ISSN: 0899-0042
PUBLISHER: Wiley-Liss, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Several brush-type chiral stationary phases (CSPs) based on undecanoyl- or butanoyl-bound (R,R)-1,2-diphenylethane-1,2-diamine (DPEDA) as chiral selector were **prepared** by an innovative, fast, and less expensive kind of **preparation** The key to this method is the immobilization of the enantiomeric pure diamine with only one amino function in a simple substitution reaction on hydroxysuccinimide ester-activated silica. No excess chiral material is lost. Loading can be easily monitored analyzing the filtrate. The free 2nd amino function can subsequently be acylated with different acyl halides. Examples with benzoyl- and 3,5-dinitrobenzoyl (DNB) amides show that, based on the authors' new approach, a library of differently acylated Pirkle-type CSPs can easily be obtained. A benzoylated analog of the com. available ULMO CSP is very effective in separating enantiomers of N-acyl amino acids.

IT **139764-32-2P**
(in-situ **preparation** of brush-type chiral stationary phases based on undecanoyl- or butanoyl-bound (R,R)-1,2-diphenylethane-1,2-diamine as chiral selector)

RN 139764-32-2 HCAPLUS

CN 2,5-Pyrrolidinedione, 1-[[11-(chlorodimethylsilyl)-1-oxoundecyl]oxy]- (9CI) (CA INDEX NAME)



CC 80-4 (Organic Analytical Chemistry)

IT Silica gel, analysis
(LiChrospher Si 100; in-situ **preparation** of brush-type chiral stationary phases based on undecanoyl- or butanoyl-bound (R,R)-1,2-diphenylethane-1,2-diamine as chiral selector)

IT **Alcohols**, analysis
Amides, analysis
(analytes; in-situ **preparation** of brush-type chiral stationary phases based on undecanoyl- or butanoyl-bound (R,R)-1,2-diphenylethane-1,2-diamine as chiral selector)

IT HPLC stationary phases
(chiral; in-situ **preparation** of brush-type chiral stationary phases based on undecanoyl- or butanoyl-bound (R,R)-1,2-diphenylethane-1,2-diamine as chiral selector)

IT Resolution (separation)
(chromatog.; in-situ **preparation** of brush-type chiral stationary phases based on undecanoyl- or butanoyl-bound (R,R)-1,2-diphenylethane-1,2-diamine as chiral selector)

IT Amino acids, analysis
(compds., amide derivative analytes; in-situ **preparation** of brush-type chiral stationary phases based on undecanoyl- or

butanoyl-bound (R,R)-1,2-diphenylethane-1,2-diamine as chiral selector)

IT Silica gel, analysis
(reaction **products**; in-situ **preparation** of brush-type chiral stationary phases based on undecanoyl- or butanoyl-bound (R,R)-1,2-diphenylethane-1,2-diamine as chiral selector)

IT 98-85-1, 1-Phenylethyl **alcohol** 529-33-9 602-09-5, 1,1'-Bis-2-naphthol 614-14-2, 1-**Phenylbutanol** 848-75-9 1205-02-3, N-Benzoyl-DL-alanine 1445-91-6, (S)-1-Phenylethyl **alcohol** 1466-83-7, N-Benzoyl-L-leucine 1517-69-7, (R)-1-Phenylethyl **alcohol** 1517-72-2 1824-74-4 2043-38-1 2198-64-3, N-Benzoyl-L-alanine 2566-22-5, N-Benzoyl-L-phenylalanine 2901-76-0, N-Benzoyl-DL-phenylalanine 4385-97-1 6296-95-3 7228-47-9 7512-20-1 15914-84-8 17207-57-7 17966-60-8, N-Benzoyl-D-alanine 17966-67-5, N-Benzoyl-DL-leucine 18531-94-7, (R)-1,1'-Bis-2-naphthol 18531-99-2, (S)-1,1'-Bis-2-naphthol 22135-49-5 22144-60-1 23357-45-1 26807-65-8 27544-18-9 37002-52-1, N-Benzoyl-D-phenylalanine 42177-25-3 52193-85-8 53732-47-1 57357-55-8, N-Benzoyl-D-leucine 66719-03-7 67942-91-0 68399-22-4 68399-23-5 69632-33-3 69632-34-4 70622-99-0 74927-93-8 74928-55-5, N-3,5-DinitroBenzoyl-DL-phenylalanine 77083-52-4 77083-53-5 83037-88-1, N-3,5-DinitroBenzoyl-L-phenylalanine 86091-63-6, N-(3,5-Dinitrobenzoyl)-L-serine 86091-64-7, N-(3,5-Dinitrobenzoyl)-DL-serine 87068-75-5 90697-07-7 90697-07-7, N-(3,5-Dinitrobenzoyl)-L-isoleucine 94942-50-4 95061-46-4 96782-77-3 96783-07-2 103238-71-7, N-(3,5-Dinitrobenzoyl)-L-proline 108998-83-0 113679-54-2 113679-56-4 114128-93-7 117466-93-0 119994-29-5 120055-45-0 120055-56-3 120932-64-1, N-3,5-DinitroBenzoyl-D-phenylalanine 121758-19-8 127413-52-9 135213-35-3, N-(3,5-Dinitrobenzoyl)-D-isoleucine 136568-67-7 137036-01-2 143492-62-0, N-(3,5-Dinitrobenzoyl)-DL-proline 143492-63-1, N-(3,5-Dinitrobenzoyl)-D-proline 143492-64-2, N-(3,5-Dinitrobenzoyl)-D-serine 143585-47-1 160235-28-9 160333-85-7 160333-86-8 160334-27-0 160334-28-1 170709-41-8 172173-67-0 207460-14-8 207460-15-9 212555-28-7 228114-26-9 228114-27-0 228114-28-1 262844-42-8 263247-50-3 304663-18-1 388091-55-2 388091-57-4 388091-58-5 388099-29-4
(analyte; in-situ **preparation** of brush-type chiral stationary phases based on undecanoyl- or butanoyl-bound (R,R)-1,2-diphenylethane-1,2-diamine as chiral selector)

IT 999-97-3, 1,1,1,3,3,3-Hexamethyldisilazane
(endcapping reagent; in-situ **preparation** of brush-type chiral stationary phases based on undecanoyl- or butanoyl-bound (R,R)-1,2-diphenylethane-1,2-diamine as chiral selector)

IT 388091-49-4DP, reaction **product** with silica gel and end-capped with hexamethyldisilazane 388091-50-7DP, reaction **product** with silica gel and end-capped with hexamethyldisilazane 388091-51-8DP, reaction **products** with silica gel and end-capped with hexamethyldisilazane 388091-52-9DP, reaction **products** with silica gel and end-capped with hexamethyldisilazane
(in-situ **preparation** of brush-type chiral stationary phases based on undecanoyl- or butanoyl-bound (R,R)-1,2-diphenylethane-1,2-diamine as chiral selector)

IT 98-88-4, Benzoyl chloride 99-33-2, 3,5-Dinitrobenzoyl chloride

112-38-9, 10-Undecenoic acid 625-38-7, 3-Butenoic acid 1066-35-9, Chlorodimethylsilane 6066-82-6, N-Hydroxysuccinimide 35132-20-8, (R,R)-1,2-Diphenylethane-1,2-diamine 155075-98-2, Kromasil 100 157065-54-8, (R,R)-N-Mono-3,5-dinitrobenzoyl-1,2-diphenylethane-1,2-diamine
(in-situ **preparation** of brush-type chiral stationary phases based on undecanoyl- or butanoyl-bound (R,R)-1,2-diphenylethane-1,2-diamine as chiral selector)

IT 110661-49-9P, Succinimidyl 10-undecenoate **139764-32-2P** 388091-45-0P, Succinimidyl 3-butenoate 388091-46-1P
(in-situ **preparation** of brush-type chiral stationary phases based on undecanoyl- or butanoyl-bound (R,R)-1,2-diphenylethane-1,2-diamine as chiral selector)

IT 388610-78-4, ULMO 388610-79-5, ULMO-C 5
(stationary phase for comparison; in-situ **preparation** of brush-type chiral stationary phases based on undecanoyl- or butanoyl-bound (R,R)-1,2-diphenylethane-1,2-diamine as chiral selector)

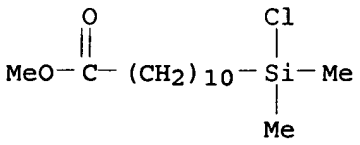
REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 14 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:662068 HCAPLUS
DOCUMENT NUMBER: 135:359155
TITLE: Ultra-thin coatings of polyvinyl **alcohol** deposited on organic monolayers
AUTHOR(S): Kozlov, Mikhail; McCarthy, Thomas J.
CORPORATE SOURCE: Department of Polymer Science and Engineering, University of Massachusetts at Amherst, Amherst, MA, 01003, USA
SOURCE: Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (**2001**), 42(2), 328-329
CODEN: ACPPAY; ISSN: 0032-3934
PUBLISHER: American Chemical Society, Division of Polymer Chemistry
DOCUMENT TYPE: Journal; (computer optical disk)
LANGUAGE: English

AB Deposition of PVOH on organic monolayers has been found to be strongly dependent on the nature of the substrate and the solution conditions. PVOH coatings are formed preferably on more hydrophobic surfaces, whereas hydrophilic substrates such as PEO-terminated monolayers do not support the formation of PVOH coatings. Salt content in the solution has been shown to have a twofold effect, enhancing hydrophobic interactions and thus promoting adsorption, but at the same time impeding aggregation of adsorbed polymer by means of hydrogen bonding.

IT **53749-38-5D**, 10-(Carbomethoxy)decyldimethylchlorosilane, reaction **products** with silica
(**preparation** and characterization of ultrathin coatings of polyvinyl **alc.** deposited on organic monolayers)

RN 53749-38-5 HCAPLUS
CN Undecanoic acid, 11-(chlorodimethylsilyl)-, methyl ester (9CI) (CA INDEX NAME)



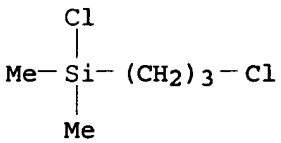
CC 42-4 (Coatings, Inks, and Related Products)
ST ultrathin coating polyvinyl **alc** deposited org monolayer
IT Polyoxyalkylenes, uses
(functionalized, monolayers; **preparation** and characterization of ultrathin coatings of polyvinyl **alc** . deposited on organic monolayers)
IT Monolayers
(perfluorinated; **preparation** and characterization of ultrathin coatings of polyvinyl **alc.** deposited on organic monolayers)
IT Coating materials
Hydrogen bond
(**preparation** and characterization of ultrathin coatings of polyvinyl **alc.** deposited on organic monolayers)
IT Coupling agents
(silanes, silica surface modified with; **preparation** and characterization of ultrathin coatings of polyvinyl **alc** . deposited on organic monolayers)
IT Contact angle
(water; **preparation** and characterization of ultrathin coatings of polyvinyl **alc.** deposited on organic monolayers)
IT 7732-18-5, Water, uses
(contact angle; **preparation** and characterization of ultrathin coatings of polyvinyl **alc.** deposited on organic monolayers)
IT 7647-14-5, Sodium chloride, uses
(medium solns.; **preparation** and characterization of ultrathin coatings of polyvinyl **alc.** deposited on organic monolayers)
IT 25322-68-3D, PEO, functionalized
(monolayers; **preparation** and characterization of ultrathin coatings of polyvinyl **alc.** deposited on organic monolayers)
IT 7631-86-9D, Silica, silylated, uses 38051-57-9D, n-Decyldimethylchlorosilane, reaction **products** with silica **53749-38-5D**, 10-(Carbomethoxy)decyldimethylchloro silane, reaction **products** with silica 102488-47-1D, (Tridecafluoro-1,1,2,2-tetrahydrooctyl)dimethylchlorosilane, reaction **products** with silica
(**preparation** and characterization of ultrathin coatings of polyvinyl **alc.** deposited on organic monolayers)
IT 9002-89-5P, Poly(vinyl **alcohol**)
(**preparation** and characterization of ultrathin coatings of polyvinyl **alc.** deposited on organic monolayers)
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 15 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:94047 HCAPLUS
DOCUMENT NUMBER: 132:222570

TITLE: The γ-Silicon Effect. IV. The Solvolysis Mechanism of 3-(Aryldimethylsilyl)propyl p-Toluenesulfonates
AUTHOR(S): Nakashima, Tohru; Fujiyama, Ryoji; Kim, Hyun-Joong; Fujio, Mizue; Tsuno, Yuho
CORPORATE SOURCE: Inst. Fundamental Res. Org. Chem., Kyushu University, Hakozaki, Fukuoka, 812-8581, Japan
SOURCE: Bulletin of the Chemical Society of Japan (**2000**), 73(2), 429-438
CODEN: BCSJA8; ISSN: 0009-2673
PUBLISHER: Chemical Society of Japan
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Solvolysis rates of 3-(aryldimethylsilyl)propyl p-toluenesulfonates were determined in various solvents. The reaction mechanism of this simple γ-silyl system was clarified based on the solvent effect and the substituent effect analyses. The solvent effect on this system clearly showed the nucleophilic assistance of solvent, but failed to correlate linearly with the extended Winstein-Grunwald equation, substantiating that the reaction should not proceed through either the formation of the cation intermediate or the SN2 mechanism. This suggests that the reaction takes place in competition between γ-silyl-assisted (kSi) and solvent-assisted (ks) pathways, and that the competition ratio varies with solvents and with aryl substituents. **Product** anal. revealed that the former pathway gave only cyclopropane and the latter gave only the substitution **products**. The overall kt value could be dissected into the partial rate consts. kSi and ks for the two pathways by using **product** ratios. The effects of aryl substituents at the γ-silyl atom on kSi pathway were correlated with unexalted σ° parameter, giving the ρ values of -1.0 in 60E (60 volume% **ethanol**-water) and -1.32 in 97Tw (97 weight% 2,2,2-**trifluoroethanol**-water), and reflecting the delocalization of incipient carbocationic charge by participation of the Si-Cγ bond. The substituent effects on the ks pathway were negligibly small; this is in line with the remote reaction center in the concerted SN2 mechanism.

IT **10605-40-0**, 3-(Chlorodimethylsilyl)propyl chloride
(metathesis with bromoarene Grignard reagents to give (arylsilyl)propyl chlorides)
RN 10605-40-0 HCAPLUS
CN Silane, chloro(3-chloropropyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



CC 29-6 (Organometallic and Organometalloidal Compounds)
ST solvolysis mechanism kinetics arylsilylpropyl tosylate; solvent effect solvolysis arylsilylpropyl tosylate; substituent effect solvolysis arylsilylpropyl tosylate; arylsilylpropyl tosylate **prepn** solvolysis kinetics mechanism
IT **Alcoholysis**
Alcoholysis kinetics

Solvolysis
Solvolysis kinetics
(of (arylsilyl)propyl toluenesulfonates)

IT 75-19-4P, Cyclopropane 261381-52-6P, (3-Ethoxypropyl)(4-methoxyphenyl)dimethylsilane 261381-53-7P, (3-Ethoxypropyl)dimethyl(phenyl)silane 261381-54-8P, (3-Ethoxypropyl)dimethyl(3-(trifluoromethyl)phenyl)silane 261381-55-9P, (3-Ethoxypropyl)dimethyl(4-tolyl)silane 261381-56-0P, (3-Ethoxypropyl)dimethyl(3-tolyl)silane 261381-57-1P, (3-Chloro-4-methoxyphenyl)(3-ethoxypropyl)dimethylsilane 261381-58-2P, (4-Chlorophenyl)(3-ethoxypropyl)dimethylsilane 261381-59-3P, Dimethyl(3-(2,2,2-trifluoroethoxy)propyl)(3-(trifluoromethyl)phenyl)silane
(formation in **ethanolysis** of (arylsilyl)propyl tosylate)

IT **10605-40-0**, 3-(Chlorodimethylsilyl)propyl chloride
(metathesis with bromoarene Grignard reagents to give (arylsilyl)propyl chlorides)

IT 98-59-9, p-Toluenesulfonyl chloride
(metathesis with lithiated (arylsilyl)**propanols**)

IT 57292-94-1P, 3-(Dimethyl(4-tolyl)silyl)-1-**propanol** 68469-62-5P, 3-(Dimethyl(phenyl)silyl)-1-**propanol** 68469-63-6P, 3-((4-Methoxyphenyl)dimethylsilyl)-1-**propanol** 261381-42-4P, 3-((3-Chloro-4-methoxyphenyl)dimethylsilyl)-1-**propanol** 261381-43-5P, 3-(Dimethyl(3-tolyl)silyl)-1-**propanol** 261381-44-6P, 3-((4-Chlorophenyl)dimethylsilyl)-1-**propanol** 261381-45-7P, 3-(Dimethyl(3-(trifluoromethyl)phenyl)silyl)-1-**propanol** 261381-46-8P, 1,1-Dideutero-3-(dimethyl(phenyl)silyl)-1-**propanol** 261381-47-9P, 1,1-Dideutero-3-((4-methoxyphenyl)dimethylsilyl)-1-**propanol** 261381-48-0P, 1,1-Dideutero-3-(dimethyl(3-(trifluoromethyl)phenyl)silyl)-1-**propanol**
(**preparation** and condensation with tosyl chloride)

IT 2632-95-3P, (3-Chloropropyl)dimethyl(phenyl)silane 54040-86-7P, (3-Chloropropyl)(4-methoxyphenyl)dimethylsilane 54040-87-8P, (3-Chloropropyl)dimethyl(4-tolyl)silane 123015-76-9P, (3-Chloropropyl)dimethyl(3-(trifluoromethyl)phenyl)silane 123015-78-1P, (4-Chlorophenyl)(3-chloropropyl)dimethylsilane 130284-15-0P, (3-Chloropropyl)dimethyl(3-tolyl)silane 261381-41-3P, (3-Chloro-4-methoxyphenyl)(3-chloropropyl)dimethylsilane
(**preparation** and conversion to **alc.** via Grignard reagent and oxygen)

IT 167282-62-4P, 3-(Dimethyl(phenyl)silyl)propyl 4-methylbenzenesulfonate 261381-35-5P, 3-((4-Methoxyphenyl)dimethylsilyl)propyl 4-methylbenzenesulfonate 261381-36-6P, 3-((3-Chloro-4-methoxyphenyl)dimethylsilyl)propyl 4-methylbenzenesulfonate 261381-37-7P, 3-(Dimethyl(4-tolyl)silyl)propyl 4-methylbenzenesulfonate 261381-38-8P, 3-(Dimethyl(3-tolyl)silyl)propyl 4-methylbenzenesulfonate 261381-39-9P, 3-((4-Chlorophenyl)dimethylsilyl)propyl 4-methylbenzenesulfonate 261381-40-2P, 3-(Dimethyl(3-(trifluoromethyl)phenyl)silyl)propyl 4-methylbenzenesulfonate 261381-49-1P, 1,1-Dideutero-3-(dimethyl(phenyl)silyl)propyl 4-methylbenzenesulfonate 261381-50-4P, 1,1-Dideutero-3-((4-methoxyphenyl)dimethylsilyl)propyl 4-methylbenzenesulfonate 261381-51-5P, 1,1-Dideutero-3-(dimethyl(3-(trifluoromethyl)phenyl)silyl)propyl 4-methylbenzenesulfonate
(**preparation** and kinetics and mechanism of solvolysis of)

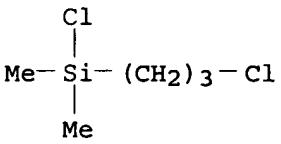
REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 16 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:680913 HCAPLUS
DOCUMENT NUMBER: 132:56942
TITLE: Communication between Surfaces by Electron Relay in a Doubly Heterogeneous Photochemical Reaction
AUTHOR(S): Ayadim, Mohamed; Jiwan, Jean L. Habib; Soumillion, Jean Ph.
CORPORATE SOURCE: Laboratory of Photochemistry, Catholic University of Louvain, Louvain La Neuve, B-1348, Belg.
SOURCE: Journal of the American Chemical Society (**1999**), 121(44), 10436-10437
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB It is shown that the surface of organically modified silica beads may be photoactivated using a sensitizer in the solution together with an electron relay: an amine is unhooked from a sulfonamide substrate attached to the silica. Furthermore it was found that a doubly heterogeneous sensitized system in which the sensitizer and the sulfonamide substrate are attached to different silica beads works even better: an electron relaying shuttle ensures communication between the beads. This surface to surface communication is, to the authors knowledge, the first example of a photoinduced electron transfer organic reaction photosensitized on one surface and relayed to another one. A nonphotochem. system related to the authors work may be cited: an **alc.** was shown to be alternately reduced and oxidized on the surfaces of silica and alumina beads charged with appropriate redox reagents (Kim, B. et al., 1983). In this paper the photoreductive deprotection of sulfonamides is taken as a test reaction for the study of heterogeneous conditions: in the authors example, 1,4-dimethoxynaphthalene sensitizes the cleavage of the sulfonamides in the presence of potassium borohydride coreductant. Four different exptl. systems were used: homogeneous reaction (system A), heterogeneous system with sensitizer (system B) or substrate (system C) covalently grafted on silica, and the doubly heterogeneous system with sensitizer and substrate grafted on different silica beads (system D).

IT **10605-40-0**, 3-Chloropropyldimethylchlorosilane
(photoreactions in heterogeneous systems containing photosensitizer and sulfonamide reactants grafted on different silica beads and electron relaying shuttle ensuring communication between these beads)

RN 10605-40-0 HCAPLUS
CN Silane, chloro(3-chloropropyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 91-20-3, Naphthalene, **processes**
(electron relay; photoreactions in heterogeneous systems containing photosensitizer and sulfonamide reactants grafted on different silica beads and electron relaying shuttle ensuring communication between these beads)

IT **10605-40-0**, 3-Chloropropyldimethylchlorosilane
(photoreactions in heterogeneous systems containing photosensitizer and sulfonamide reactants grafted on different silica beads and electron relaying shuttle ensuring communication between these beads)

IT 7631-86-9D, Silica, surface modified, **processes**
(photoreactions in heterogeneous systems containing photosensitizer and sulfonamide reactants grafted on different silica beads and electron relaying shuttle ensuring communication between these beads)

IT 5450-75-9D, surface reaction **product** with chloropropyl-modified silica or trimethylated silica
(photoreactions in heterogeneous systems containing photosensitizer and sulfonamide reactants grafted on different silica beads and electron relaying shuttle ensuring communication between these beads)

IT 252848-35-4DP, surface reaction **product** with chloropropyl-modified or trimethylated silica
(photoreactions in heterogeneous systems containing photosensitizer and sulfonamide reactants grafted on different silica beads and electron relaying shuttle ensuring communication between these beads)

IT 84-85-5D, 4-Methoxy-1-naphthol, surface reaction **product** with chloropropyl-modified or trimethylsilylated silica
(photosensitizer; photoreactions in heterogeneous systems containing photosensitizer and sulfonamide reactants grafted on different silica beads and electron relaying shuttle ensuring communication between these beads)

IT 75-77-4, Trimethylchlorosilane, uses 121-44-8, Triethylamine, uses
(**preparation** of trimethylsilylated silica surface)

IT 114958-23-5P
(reaction with dicyclohexylcarbodiimide and hydroxysuccinimide in **synthesis** of sulfonamide derivative)

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

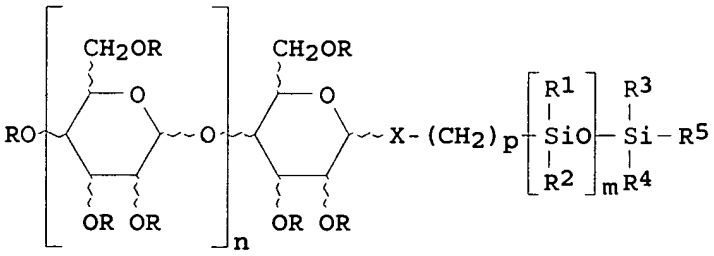
L15 ANSWER 17 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:228013 HCAPLUS
DOCUMENT NUMBER: 130:312019
TITLE: **Preparation** of organopolysiloxane compounds having sugar residues as dermal absorption enhancers for drugs
INVENTOR(S): Nagase, Hiroshi; Akimoto, Satoko; Aoyagi,

Takao; Akiyama, Eiichi
PATENT ASSIGNEE(S): Sagami Chemical Research Center, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

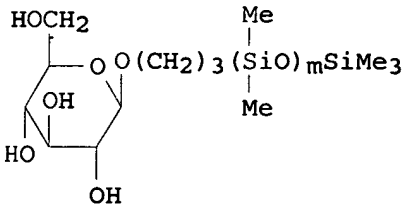
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11092490	A2	19990406	JP 1998-200151 <--	1998 0715

PRIORITY APPLN. INFO.: JP 1997-200322 A 1997 0725 <--

GI



I



II

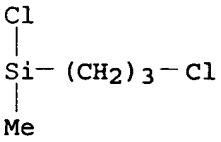
AB The polysiloxane glycosides (I; R = H, acyl; X = O, S; R1-R4 = C1-6 alkyl; R5 = C1-20 alkyl; n = 0,1,2; p = 3-6; m = integer of ≥1) are **prepared** Also claimed is a dermal absorption enhancer containing I (R = H; X, R1-R5, n,p,m = same as above) for drugs. The above compds. I possess good dermal absorption-enhancing effect not only for hydrophorbic but also water-soluble drugs and are low in skin-irritation and toxicity and are used in a drug delivery system. Thus, allyl 2,3,4,6-tetraacetyl-β-D-glucopyranoside (**preparation** given) underwent add. reaction (hydrosilylation) with H(SiMe2O)mSiMe3 in the presence of dicyclopentadienyl platinum dichloride in THF at 70° for 2 h followed by deacetylation

with NaOMe in MeOH gave the title compound (II; m = integer of ≥1). A solution containing 20 mg antipyrin (antiinflammatory agent) and 2 weight% II in 2 mL 50% aqueous EtOH in a donor chamber was contacted through a rabbit abdominal skin with a solution of a phosphate buffer (pH 7.4) in a receptor chamber in a 2-chamber cell at 37° for 12 h while both chambers were stirred. The cumulative amount of antipyrin permeated through the skin was 0.189 and 0.935 mg after 6 and 12 h, resp., vs. 0.056 and 0.140 mg after 6 and 12 h, resp.

IT **10605-40-0**, (3-Chloropropyl)dimethylsilyl chloride
(**preparation** of organopolysiloxane compds. having sugar residues as dermal absorption enhancers for drugs)

RN 10605-40-0 HCAPLUS

CN Silane, chloro(3-chloropropyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM C07H015-04
ICS C07H015-04; A61K047-26; A61K047-30

CC 33-4 (Carbohydrates)
Section cross-reference(s): 1

ST polysiloxane glycoside **prepn** drug delivery system; organopolysiloxane contg sugar **prepn** drug dermal absorption enhancer

IT Drug delivery systems
(carriers; **preparation** of organopolysiloxane compds. having sugar residues as dermal absorption enhancers for drugs)

IT Drug delivery systems
(**preparation** of organopolysiloxane compds. having sugar residues as dermal absorption enhancers for drugs)

IT Polysiloxanes, **preparation**
(**preparation** of organopolysiloxane compds. having sugar residues as dermal absorption enhancers for drugs)

IT 157622-01-0P 223536-19-4P 223536-21-8P 223536-23-0P
(**preparation** of organopolysiloxane compds. having sugar residues as dermal absorption enhancers for drugs)

IT 62-56-6, Thiourea, reactions 107-18-6, 2-Propen-1-ol, reactions 112-41-4, 1-Dodecene 604-69-3, β-D-Glucose pentaacetate 1066-35-9, Dimethylsilyl chloride 1066-40-6, **Trimethylsilanol** 3277-26-7 6919-96-6, 2,3,4,6-Tetra-O-acetyl-β-D-glucopyranosyl bromide **10605-40-0**, (3-Chloropropyl)dimethylsilyl chloride 20764-63-0, D-(+)-Cellobiose octaacetate
(**preparation** of organopolysiloxane compds. having sugar residues as dermal absorption enhancers for drugs)

IT 10343-15-4P, Allyl 2,3,4,6-tetra-O-acetyl-β-D-glucopyranoside 40591-65-9P, S-(2,3,4,6-Tetra-O-acetyl-β-D-glucopyranosyl)isothiourea hydrobromide 50256-34-3P 128147-45-5P 172413-82-0P 172413-83-1P 223536-24-1P 223536-25-2P 223536-26-3P 223536-27-4P
(**preparation** of organopolysiloxane compds. having sugar residues as dermal absorption enhancers for drugs)

L15 ANSWER 18 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:392268 HCAPLUS
DOCUMENT NUMBER: 129:78836
TITLE: Fluorescence energy transfer and intramolecular energy transfer in particles using novel compounds for the application in immunoassays and nucleic acid assays
INVENTOR(S): Buechler, Kenneth F.; Noar, J. Barry; Tadesse, Lema
PATENT ASSIGNEE(S): Biosite Diagnostics Inc., USA
SOURCE: U.S., 36 pp., Cont.-in-part of U. S. Ser. No. 274,534.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 7
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5763189	A	19980609	US 1994-311098 <--	19940923
US 6238931	B1	20010529	US 1994-274534 <--	19940712
US 6251687	B1	20010626	US 1995-409298 <--	19950323
US 5824799	A	19981020	US 1996-620597 <--	19960322
US 6964844	B1	20051115	US 1998-66255 <--	19980424
US 2002061602	A1	20020523	US 2001-776599 <--	20010201
PRIORITY APPLN. INFO.:			US 1993-126367 B2 <--	19930924
			US 1993-138708 B2 <--	19931018
			US 1994-274534 A2 <--	19940712
			US 1994-311098 A2	19940923

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WO 1994-US10826 W
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US 1995-409298 A2
1995
0323
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US 1995-409825 A2
1995
0323
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US 1996-620597 A1
1996
0322
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US 1998-66255 A2
1998
0424
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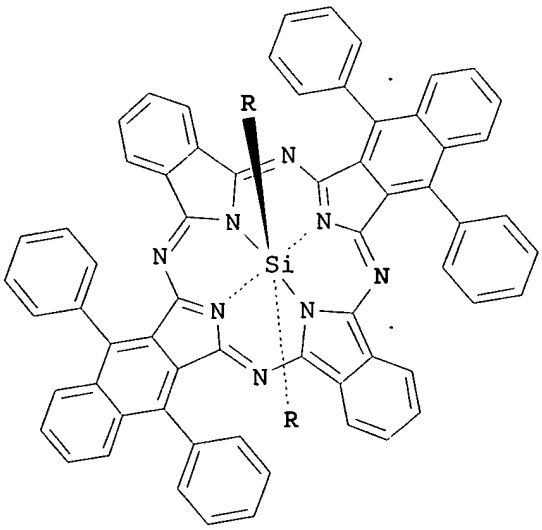
OTHER SOURCE(S): MARPAT 129:78836

GI



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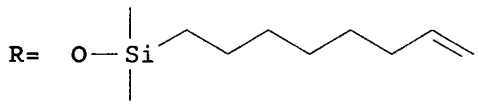


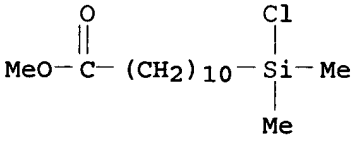
AB The invention concerns the **synthesis** of novel dyes and methods for the detection or visiualization of analytes; more specifically fluorescent latex particles which randomly incorporate the novel fluorescent dyes and utilize fluorescent energy transfer and intramol. energy transfer, for the detection

of analytes in immunoassays or in nucleic acid assay. Particles comprise an energy donor as a first component and a fluorescent dye as a second component that are positioned at an energy exchanging distance from one another; the two components have a Stokes shift of greater than or equal to 50 nm; and the particles bind on the surface a protein, polypeptide, nucleic acid, nucleotide or protein containing ligand analog. In addition, novel fluorescent dyes (e.g., I) are described which exhibit intramol. energy transfer for use to label various mols., proteins, polypeptides, nucleotides and nucleic acids or to incorporate into particles. Compns. are given to minimize fluorescence quenching and to maximize fluorescence intensities of the dye mols. in the particles through the use of different dye mols. which posses the same or very similar excitation and emission wavelengths. Many novel phthalocyanine derivs. and hybrid phthalocyanine derivs. are disclosed. Thus latex microparticles have at least one hybrid phthalocyanine derivative, that derivative has at least one donor subunit with a desired excitation peak; and at least one acceptor unit with desired emission peak. The derivative(s) is/are capable of intramol. energy transfer from the donor subunit to the acceptor subunit; such derivs. also may contain and electron transfer subunit. Axial ligands may covalently bound to the metals contained in the hybrid phthalocyanine derivs. Numerous compds. capable of intramol. energy transfer as well as compds. for fluorescence energy transfer were **synthesized.**

IT **53749-38-5**, (10-Carbomethoxydecyl)dimethylchlorosilane
(Fluorescence energy transfer and intramol. energy transfer in particles using novel compds. for the application in immunoassays and nucleic acid assays)

RN 53749-38-5 HCAPLUS

CN Undecanoic acid, 11-(chlorodimethylsilyl)-, methyl ester (9CI) (CA INDEX NAME)



IC ICM G01N033-542
ICS G01N033-543; C09K009-00; C09K009-02

INCL 435007100

CC 9-16 (Biochemical Methods)
Section cross-reference(s): 3, 15, 28, 29

ST fluorescence dye energy transfer latex immunoassay; phthalocyanine naphthalocyanine deriv **synthesis** fluorescent dye

IT 68-12-2P, Dimethylformamide, **preparation** 71-41-0P, 1-**Pentanol, preparation** 109-99-9P, Tetrahydrofuran, **preparation** 119-64-2P, 1,2,3,4-Tetrahydronaphthalene
(Fluorescence energy transfer and intramol. energy transfer in particles using novel compds. for the application in immunoassays and nucleic acid assays)

IT 75-78-5, Dichlorodimethylsilane 76-86-8, Triphenylchlorosilane 597-52-4, **Triethylsilanol** 1631-83-0, Diphenylchlorosilane 1719-58-0, Chlorodimethylvinylsilane 1835-65-0, Tetrafluorophthalonitrile 3468-11-9, 1,3-Diiminoisoindoline 3634-67-1, Chlorotrihexylsilane

6554-98-9, trans-4-Hydroxystilbene 7646-78-8, Tin tetrachloride, reactions 10026-04-7, Silicon tetrachloride 10038-98-9, Germanium tetrachloride 10264-67-2 17196-12-2, 7-Oct-enyldimethylchlorosilane 18156-15-5, Chloro(3-cyanopropyl)-dimethylsilane 19333-10-9, Silicon phthalocyanine dichloride 20082-71-7, Chlorodimethylpentafluorophenylsilane 26857-61-4 32703-80-3, 4-tert-Butylphthalonitrile 37623-03-3, 1,4-Diphenylnaphthalene-2,3-dicarbonitrile **53749-38-5**, (10-Carbomethoxydecyl)dimethylchlorosilane 74815-81-9, 2,3-Dibromo-6,7-dicyanonaphthalene 92396-91-3 102488-47-1 105528-25-4 116453-89-5, 1,4-Dibutoxynaphthalene-2,3-dicarbonitrile 183872-68-6, 4,7-Diethoxy-1,3-diiminoisoindoline
(Fluorescence energy transfer and intramol. energy transfer in particles using novel compds. for the application in immunoassays and nucleic acid assays)

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 19 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:65914 HCAPLUS
DOCUMENT NUMBER: 128:115084
TITLE: Functionalized ferrocenyldiphosphines, a **process** for their **preparation** and their use
INVENTOR(S): Pugin, Benoit; Landert, Heidi
PATENT ASSIGNEE(S): Novartis A.-G., Switz.; Pugin, Benoit; Landert, Heidi
SOURCE: PCT Int. Appl., 91 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9801457	A1	19980115	WO 1997-EP3626	1997 0709
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W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2256770	AA	19980115	CA 1997-2256770	1997 0709
			<--	
AU 9736211	A1	19980202	AU 1997-36211	1997 0709
			<--	
EP 912586	A1	19990506	EP 1997-932789	

				1997 0709 <--
EP 912586	B1	20020116		
R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL				
JP 2000514436	T2	20001031	JP 1998-504804	1997 0709 <--
AT 212032	E	20020215	AT 1997-932789	1997 0709 <--
ES 2171267	T3	20020901	ES 1997-932789	1997 0709 <--
US 6169192	B1	20010102	US 1999-214667	1999 0108 <--
PRIORITY APPLN. INFO.:			CH 1996-1746 A	1996 0710 <--
			CH 1996-2069 A	1996 0823 <--
			WO 1997-EP3626 W	1997 0709 <--

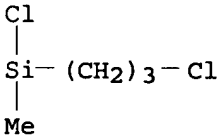
OTHER SOURCE(S): MARPAT 128:115084

AB The invention relates to 1,2-ferrocenyldiphosphines which contain a functional group in the 1' position either directly or via a bridging group, and also a **process** for their **preparation** The compds. are important ligands for transition metal complexes containing d-8 metals such as Rh, Ru, Pd or Ir. These transition metal complexes are widely used in the hydrogenation of organic double or triple bonds, in particular olefinic double bonds and C-heteroatom double bonds. The complexes are particularly suitable for enantioselective hydrogenation using chiral ferrocenyldiphosphines and corresponding prochiral unsatd. compds. Ferrocenyldiphosphines having a functional group in the 1' position are also important intermediates for ferrocenyldiphosphine ligands and their metal complexes of d-8 metals such as Rh, Ru, Pd or Ir which are bound to inorg. or organic polymeric supports via this functional group. These metal complexes bound to an inorg. or organic support material are likewise very suitable for the hydrogenation of organic double or triple bonds.

IT **10605-40-0**, Chloro(3-chloropropyl)dimethylsilane (**preparation** of ferrocenyldiphosphines as hydrogenation catalysts)

RN 10605-40-0 HCAPLUS

CN Silane, chloro(3-chloropropyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



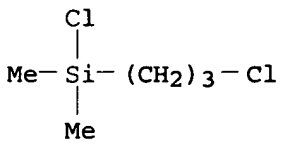
IC ICM C07F017-02
ICS B01J031-28; C07B031-00; C07B053-00; C08F112-08
CC 29-12 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 34
ST ferrocenyl phosphine **prepn** hydrogenation catalyst
IT Polyoxyalkylenes, reactions
(**preparation** of ferrocenyldiphosphines as hydrogenation catalysts)
IT Silica gel, reactions
(reaction **products**; polymers as supports for ferrocenyldiphosphines hydrogenation catalysts)
IT 9002-89-5, Polyvinyl **alcohol** 9003-01-4 9003-70-7D, aminomethylated 25322-68-3
(**preparation** of ferrocenyldiphosphines as hydrogenation catalysts)
IT 201551-71-5P 201552-06-9P
(**preparation** of ferrocenyldiphosphines as hydrogenation catalysts)
IT 201551-65-7P 201551-77-1P 201551-90-8P 201552-03-6DP, polyethyleneglycol (methyl)diisocyanophenylated, supported 201552-06-9DP, Amberlite IRC 50 supported 201552-06-9DP, Amberlite IRC 76 supported 201552-06-9DP, polyacrylic acid supported 201552-11-6DP, (methyl)diisocyanophenylated aminomethylated polystyrene divinylbenzene supported 201552-11-6DP, aminomethylated polystyrene divinylbenzene supported 201552-11-6DP, polyvinyl **alc.** supported
(**preparation** of ferrocenyldiphosphines as hydrogenation catalysts)
IT 78-95-5, Chloroacetone 85-41-6, Phthalimide 90-80-2 105-53-3, Diethyl malonate 109-73-9, Butylamine, reactions 111-36-4, Butyl isocyanate 503-30-0, Oxetane 530-62-1, 1,1'-Carbonyldiimidazole 584-84-9 996-82-7, Diethyl sodiomalonate 1079-66-9, Chlorodiphenylphosphine 4009-98-7, Methoxymethyltriphenylphosphonium chloride 9002-29-3, Amberlite IRC 50 **10605-40-0**, Chloro(3-chloropropyl)dimethylsilane 24801-88-5 31886-58-5 71360-06-0, Bis(3,5-xylyl)phosphine 153550-33-5, Amberlite IRC 76 183720-68-5 183720-73-2
(**preparation** of ferrocenyldiphosphines as hydrogenation catalysts)
IT 182227-18-5P 182227-20-9P 201551-64-6P 201551-66-8P 201551-69-1P 201551-75-9P 201551-88-4P 201551-99-7P 201552-03-6P 201552-05-8P 201552-08-1P 201552-11-6P
(**preparation** of ferrocenyldiphosphines as hydrogenation catalysts)
IT 201551-68-0P 201551-73-7P 201551-81-7P 201551-92-0P 201551-94-2P 201551-96-4P 201551-99-7DP, polystyrene supported 201552-01-4P 201552-03-6DP, hydrogenated hydroxy terminated polybutadiene (methyl)diisocyanophenylated, supported 201552-07-0P 201552-09-2P 201552-10-5P
(**preparation** of ferrocenyldiphosphines as hydrogenation catalysts)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE

IN THE RE FORMAT

L15 ANSWER 20 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:748123 HCAPLUS
DOCUMENT NUMBER: 128:145262
TITLE: Polymeric percutaneous drug penetration enhancer. **Synthesis** and enhancing property of PEG/PDMS block copolymer with a cationic end group
AUTHOR(S): Akimoto, Tomoko; Aoyagi, Takao; Minoshima, Jun-ichi; Nagase, Yu
CORPORATE SOURCE: Sagamihara, Nishi-Ohnuma, Sagami Chemical Research Center, Kanagawa 229, 4-4-1, Japan
SOURCE: Journal of Controlled Release (**1997**), 49(2,3), 229-242
CODEN: JCREEC; ISSN: 0168-3659
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Polyethylene glycol/polydimethylsiloxane (PEG/PDMS) block copolymers containing an ammonium moiety at one chain end with various mol. wts. were **prepared** to develop a silicone-based polymeric transdermal penetration enhancer. As the precursor of the desired block copolymer, 3-chloropropyl-terminated PEG/PDMS block copolymers were **prepared** via an initiator method, i.e. the anionic ring-opening polymerization of hexamethylcyclotrisiloxane was carried out by initiating with **silanolate** anion derived from PEG-**silanol**, α-3-(dimethylhydroxysilyl)propyl-ω-methyl-PEG oligomer. The initiator, PEG-**silanol**, was obtained from α-allyl-PEG by hydrosilylation with dimethylethoxysilane, followed by hydrolysis of the ethoxysilyl group. The enhancing activity in the drug penetration was evaluated by in vitro expts. using a two-chamber diffusion cell. Indomethacin and antipyrine were used as hydrophobic and hydrophilic model drugs, resp., and the amts. of drugs permeating through the rabbit abdominal skin were measured with or without these polymeric enhancers. These enhancers were very effective for the penetration of hydrophilic drug, but not for that of hydrophobic one. On the other hand, the enhancing activities were influenced by the chain length of PDMS and PEG components. A suitable balance between the hydrophobic PDMS segment and the hydrophilic PEG segment would exist for a high enhancing activity of drug penetration. It was also found that the enhancing activity was due to an increase of the partition coefficient of a drug into the stratum corneum, from the determination of kinetic parameters in the drug permeation.

IT **10605-40-0**, 3-Chloropropyldimethylchlorosilane
(**preparation** and percutaneous enhancing property of PEG/PDMS block copolymer with a cationic end group)
RN 10605-40-0 HCAPLUS
CN Silane, chloro(3-chloropropyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



CC 63-5 (Pharmaceuticals)
Section cross-reference(s): 35
IT Biological transport
(permeation; **preparation** and percutaneous enhancing property of PEG/PDMS block copolymer with a cationic end group)
IT Polysiloxanes, biological studies
(polyoxyethylene-, block, quaternary ammonium group-terminated; **preparation** and percutaneous enhancing property of PEG/PDMS block copolymer with a cationic end group)
IT Skin
(**preparation** and percutaneous enhancing property of PEG/PDMS block copolymer with a cationic end group)
IT Drug delivery systems
(transdermal; **preparation** and percutaneous enhancing property of PEG/PDMS block copolymer with a cationic end group)
IT 170210-26-1DP, quaternary ammonium-group terminated
(**preparation** and percutaneous enhancing property of PEG/PDMS block copolymer with a cationic end group)
IT 598-56-1DP, N,N-Dimethylethylamine, reaction **products** with iodopropyl-terminated PEG-polydimethylsiloxane copolymer
927-62-8DP, 1-Butanamine, N,N-dimethyl-, reaction **products** with iodopropyl-terminated PEG-polydimethylsiloxane copolymer
7378-99-6DP, 1-Octanamine, N,N-dimethyl-, reaction **products** with iodopropyl-terminated PEG-polydimethylsiloxane copolymer
(**preparation** and percutaneous enhancing property of PEG/PDMS block copolymer with a cationic end group)
IT 53-86-1, Indomethacin 60-80-0, Antipyrine
(**preparation** and percutaneous enhancing property of PEG/PDMS block copolymer with a cationic end group)
IT 106-95-6, 3-Bromopropene, reactions 9004-74-4 **10605-40-0**, 3-Chloropropyldimethylchlorosilane 14857-34-2, Dimethylethoxysilane
(**preparation** and percutaneous enhancing property of PEG/PDMS block copolymer with a cationic end group)
IT 27252-80-8P, Poly(oxy-1,2-ethanediyl), α-methyl-ω-(2-propenyloxy)- 164149-53-5P 202209-58-3P 202209-59-4P
(**preparation** and percutaneous enhancing property of PEG/PDMS block copolymer with a cationic end group)
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 21 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:761698 HCAPLUS
DOCUMENT NUMBER: 126:33023
TITLE: Hybrid phthalocyanine derivatives and their uses
INVENTOR(S): Buechler, Kenneth F.; Noar, Joseph B.; Tadesse, Lema
PATENT ASSIGNEE(S): Biosite Diagnostics Incorporated, USA
SOURCE: PCT Int. Appl., 190 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 7
PATENT INFORMATION:

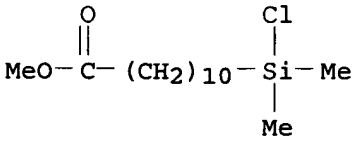
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 9629367	A1	19960926	WO 1996-US3833	1996 0322 <--
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML				
CA 2215727	AA	19960926	CA 1996-2215727	1996 0322 <--
CA 2215727	C	20031230		
AU 9653188	A1	19961008	AU 1996-53188	1996 0322 <--
EP 820489	A1	19980128	EP 1996-909805	1996 0322 <--
EP 820489	B1	20010711		
R: AT, CH, DE, ES, FR, GB, IT, LI, NL				
JP 10508897	T2	19980902	JP 1996-528604	1996 0322 <--
JP 3388753	B2	20030324		
AT 203045	E	20010715	AT 1996-909805	1996 0322 <--
PRIORITY APPLN. INFO.:			US 1995-409825 A	1995 0323 <--
			WO 1996-US3833 W	1996 0322 <--

AB Water-soluble hybrid phthalocyanine derivs., fluorescent latex particles incorporating which are useful in competitive and noncompetitive immunoassays and nucleic acid assays, have (1) ≥1 donor subunit with a desired excitation peak and (2) ≥1 acceptor subunit with a desired emission peak, and are capable of intramol. energy transfer from the donor subunit to the acceptor subunit. They may also contain an electron-transfer subunit. Axial ligands may be covalently bound to the metals contained in the water-soluble hybrid phthalocyanine derivs. Ligands, ligand analogs, polypeptides, proteins, and nucleic acids can be linked to the axial ligands of the dyes to form conjugates useful in immunoassays and nucleic acid assays.

IT **53749-38-5**, (10-Carbomethoxydecyl)chlorodimethylsilane (**preparation** of water-soluble fluorescent hybrid phthalocyanine derivs. for immunoassays)

RN 53749-38-5 HCAPLUS
CN Undecanoic acid, 11-(chlorodimethylsilyl)-, methyl ester (9CI) (CA INDEX NAME)



IC ICM C09B047-04
ICS G01N033-533; C07D487-22; C07F007-08
ICI C07D487-22, C07D259-00, C07D209-00
CC 41-7 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 9, 15
IT Latex
(anti-human chorionic gonadotropin antibody conjugates; **preparation** of water-soluble fluorescent spitzehybrid phthalocyanine derivs. as dye systems for immunoassays)
IT Immunoassay
(**preparation** of water-soluble fluorescent hybrid phthalocyanine derivs. as dye systems for immunoassays)
IT Polyoxyalkylenes, reactions
(**preparation** of water-soluble fluorescent hybrid phthalocyanine derivs. for immunoassays)
IT Blood analysis
Body fluid
Fluorescent dyes
(**preparation** of water-soluble fluorescent spitzehybrid phthalocyanine derivs. as dye systems for immunoassays)
IT Nucleic acids
(**preparation** of water-soluble fluorescent spitzehybrid phthalocyanine derivs. as dye systems for immunoassays)
IT Antibodies
(sulfonated hybrid phthalocyanine derivative conjugates; **preparation** of water-soluble fluorescent hybrid phthalocyanine derivs. as dye systems for immunoassays)
IT 9002-61-3, Chorionic gonadotropin
(antibodies specific for; **preparation** of water-soluble fluorescent hybrid phthalocyanine derivs. and antibody conjugates for immunoassays)
IT 9003-53-6D, Polystyrene, sulfate
(latex; **preparation** of water-soluble fluorescent spitzehybrid phthalocyanine derivs. as dye systems for immunoassays)
IT 67881-06-5P 68812-20-4P 92396-89-9P, Bis[(trihexylsilyl)oxy]silicon phthalocyanine 117753-12-5P 142700-81-0DP, sulfonated 149971-18-6P 153454-01-4P 163968-88-5P 163968-89-6P 163968-91-0P, Silicon, bis(**ethenyldiphenylsilanolato**)[37H,39H-tetranaphtho[2,3-b:2',3'-g:2'',3''-l:2''',3'''-q]porphyrazinato(2-)-N37,N38,N39,N40]-, (OC-6-12)- 163968-92-1P 163968-94-3P 163968-95-4P 163969-00-4P 163969-01-5P 163969-07-1P 163969-08-2P 163969-09-3P 163969-10-6P 163969-11-7P 163969-14-0P 163969-15-1P 163969-26-4P 171118-91-5P 171118-94-8P 183872-48-2P 183872-49-3P 183872-50-6P 183872-51-7P 183872-55-1P 183872-56-2P 183872-57-3DP, sulfonated 183872-57-3P 183872-58-4P 183872-59-5P

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183872-84-6P 183872-85-7P 183872-86-8P 183872-87-9P
183872-88-0P 183872-89-1P 183872-90-4P 183872-92-6P
183872-94-8P 183872-95-9P 183872-96-0P 183872-97-1P
183872-98-2P 183872-99-3P 183873-00-9P 183873-03-2P
183873-05-4DP, sulfonated 183873-07-6DP, sulfonated
183873-11-2DP, sulfonated 183873-13-4DP, sulfonated
183873-14-5DP, sulfonated 183873-15-6DP, sulfonated
183873-17-8DP, sulfonated 183873-19-0P 183873-20-3P
183973-58-2P 183973-60-6P 183973-61-7P 184013-80-7P
(**preparation** of water-soluble fluorescent hybrid phthalocyanine derivs. for immunoassays)

IT 19333-15-4P, Silicon phthalocyanine dihydroxide 37623-03-3P, 1,4-Diphenyl-2,3-naphthalenedicarbonitrile 41345-70-4P, 3-(Acetylthio)propanoic acid 52319-97-8P, 5-tert-Butyl-1,3-diiminoisoindoline 63405-81-2P, 5,6-Dichloro-1,3-diiminoisoindoline 92396-90-2P, Silicon naphthalocyanine dihydroxide 97241-14-0P, 1,3-Diiminoisoindoline-5,6-dicarbonitrile 111305-19-2P, 4,5,6,7-Tetrafluoro-1,3-diiminoisoindoline 121668-81-3P 163968-99-8P, 4,9-Diethoxy-1,3-diiminobenz[f]isoindoline 163969-16-2P 163969-17-3P 163969-19-5P, Dimethyl-7-**octenylsilanol** 163969-20-8P, 4,9-Dibutoxy-1,3-diiminobenz[f]isoindoline 163969-21-9P, 1,3-Diimino-4,9-diphenylbenz[f]isoindoline 163969-23-1P, 6,7-Dibromo-1,3-diiminobenz[f]isoindoline 183872-52-8DP, sulfonated 183872-52-8P 183872-53-9P 183872-54-0P 183872-60-8P 183872-64-2P 183872-67-5P 183872-68-6P, 4,7-Diethoxy-1,3-diiminoisoindoline 183872-69-7P 183872-70-0P 183872-73-3P 183872-75-5P 183872-78-8P 183872-80-2P 183872-83-5P 183872-91-5P 183872-93-7P 183873-01-0P 183873-09-8DP, sulfonated 183873-16-7DP, sulfonated 183873-18-9P 183973-59-3P
(**preparation** of water-soluble fluorescent hybrid phthalocyanine derivs. for immunoassays)

IT 68-26-8, all-trans-Retinol 75-78-5 76-86-8, Chlorotriphenylsilane 79-08-3, Bromoacetic acid 107-96-0 108-30-5, reactions 108-95-2, Phenol, reactions 111-87-5, 1-**Octanol**, reactions 140-66-9 597-52-4, **Triethylsilanol** 712-74-3, 1,2,4,5-Benzenetetracarbonitrile 1585-90-6, N-(2-Hydroxyethyl)maleimide 1719-58-0, Chlorodimethylvinylsilane 1835-65-0, Tetrafluorophthalonitrile 2466-76-4, 1-Acetylimidazole 3468-11-9, 1,3-Diiminoisoindoline 3634-67-1, Chlorotrihexylsilane 3663-43-2, (4-Aminobutyl)methoxydimethylsilane 4655-61-2, 1,4-Dimethoxy-2,3-naphthalenedicarbonitrile 6038-19-3, Homocysteine thiolactone hydrochloride 6554-98-9, trans-4-Hydroxystilbene 9004-74-4 10264-67-2, 3,6-Diethoxyphthalonitrile 17196-12-2, Chlorodimethyl-7-octenylsilane 18156-15-5, Chloro(3-cyanopropyl)dimethylsilane 18162-48-6, tert-Butylchlorodimethylsilane 18419-53-9, Chlorodiphenylvinylsilane 18643-08-8, Chlorodimethyloctadecylsilane 19333-10-9, Silicon phthalocyanine dichloride 20082-71-7, Chlorodimethyl(pentafluorophenyl)silane 25322-68-3 26857-61-4 32703-80-3, 4-tert-Butylphthalonitrile 36360-42-6, 3,6-Diphenylphthalonitrile **53749-38-5**, (10-Carbomethoxydecyl)chlorodimethylsilane 74815-81-9, 2,3-Dibromo-6,7-dicyanonaphthalene 92396-90-2D, sulfonated, compound with triethylamine 92396-91-3, Silicon naphthalocyanine

dichloride 102488-47-1, Chlorodimethyl(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)silane 116453-89-5, 1,4-Dibutoxynaphthalene-2,3-dicarbonitrile 116453-91-9, 1,4-Diethoxy-2,3-naphthalenedicarbonitrile 139152-08-2, 4,5-Dichlorophthalonitrile 163969-13-9 163969-22-0 183873-12-3 184047-30-1
(**preparation** of water-soluble fluorescent hybrid phthalocyanine derivs. for immunoassays)

IT 57-27-2, Morphine, uses
(sulfonated hybrid phthalocyanine derivative conjugates; **preparation** of water-soluble fluorescent hybrid phthalocyanine derivs. as dye systems for immunoassays)

L15 ANSWER 22 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:175688 HCAPLUS
DOCUMENT NUMBER: 124:203399
TITLE: **Preparation** of diphenylsiloxane-dimethylsiloxane copolymers of narrow molecular weight distribution
INVENTOR(S): Okawa, Tadashi
PATENT ASSIGNEE(S): Dow Corning Toray Silicone Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 693521	A1	19960124	EP 1995-111454	1995 0720
			<--	
R: DE, FR, GB				
JP 08034855	A2	19960206	JP 1994-191075	1994 0721
			<--	
JP 3453430	B2	20031006		
US 5567790	A	19961022	US 1995-503601	1995 0714
			<--	
PRIORITY APPLN. INFO.:			JP 1994-191075 A	1994 0721
			<--	

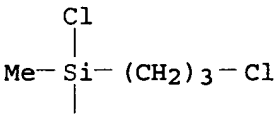
AB The title method comprises (I) polymerizing (A) a mixture of hexamethylcyclotrisiloxane and hexaphenylcyclotrisiloxane, using as a polymerization initiator (B) a Li metal salt of organosilane or polyorganosiloxane, optionally, in the presence of (C) a mol.-weight regulator selected from H2O or a **silanol** compound, the polymerization taking place in the presence of both (D) a nitrile compound for restraining side reactions and (E) an active H-free polar solvent; and (II) terminating the polymerization reaction **product** from step (I) with a neutralizing agent selected from an acid or an organohalosilane. Dimethylsiloxane-diphenylsiloxane copolymer was made using Li adduct of siloxane diol oligomer, acetonitrile

inhibitor of side reactions, acetic acid chain terminator, and DMF solvent, and having number-average mol. weight 4870 and mol. weight distribution 1.15.

IT **10605-40-0**
(chain terminator via Li **silanolate** neutralization; nitrile side reaction inhibitor in **preparation** of diphenylsiloxane-dimethylsiloxane copolymers of narrow mol. weight distribution)

RN 10605-40-0 HCAPLUS

CN Silane, chloro(3-chloropropyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM C08G077-08
ICS C08G077-06

CC 35-7 (Chemistry of Synthetic High Polymers)

IT Polymerization
(nitrile side reaction inhibitor in **preparation** of diphenylsiloxane-dimethylsiloxane copolymers of narrow mol. weight distribution)

IT Siloxanes and Silicones, **preparation**
(di-Me, di-Ph, nitrile side reaction inhibitor in **prepn** . of diphenylsiloxane-dimethylsiloxane copolymers of narrow mol. weight distribution)

IT 64-19-7, Acetic acid, uses 79-09-4, Propionic acid, uses 79-10-7, Acrylic acid, uses 124-38-9, Carbon dioxide, uses 1066-35-9, Dimethylchlorosilane 1719-58-0, Dimethylvinylchlorosilane 7647-01-0, Hydrochloric acid, uses 7664-93-9, Sulfuric acid, uses **10605-40-0** 24636-31-5, Methacryloxypropyldimethylchlorosilane
(chain terminator via Li **silanolate** neutralization; nitrile side reaction inhibitor in **preparation** of diphenylsiloxane-dimethylsiloxane copolymers of narrow mol. weight distribution)

IT 109-72-8D, n-Butyllithium, reaction **product** with siloxane oligomer 17574-46-8 58556-58-4 106211-26-1 174614-54-1 174614-55-2 174614-56-3 174614-57-4 174614-58-5 174614-59-6 174614-60-9
(nitrile side reaction inhibitor in **preparation** of diphenylsiloxane-dimethylsiloxane copolymers of narrow mol. weight distribution)

IT 29300-68-3DP, Hexamethylcyclotrisiloxane-hexaphenylcyclotrisiloxane copolymer, hydroxy group-terminated
(nitrile side reaction inhibitor in **preparation** of diphenylsiloxane-dimethylsiloxane copolymers of narrow mol. weight distribution)

IT 75-05-8, Acetonitrile, uses 78-82-0, Isobutyronitrile 107-12-0, Propionitrile 109-74-0, Butyronitrile 110-59-8, Valeronitrile 110-61-2, Succinonitrile 140-29-4, α-Tolunitrile
(nitrile side reaction inhibitor in **preparation** of diphenylsiloxane-dimethylsiloxane copolymers of narrow mol. weight distribution)

L15 ANSWER 23 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:175687 HCAPLUS
DOCUMENT NUMBER: 124:203398
TITLE: **Preparation** of siloxanes with minimal amount of low molecular weight organosiloxane
INVENTOR(S): Manzouji, Ryuko; Okawa, Tadashi
PATENT ASSIGNEE(S): Dow Corning Toray Silicone Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

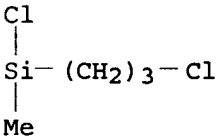
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 693520	A1	19960124	EP 1995-111453	1995 0720 <--
EP 693520	B1	20000823		
R: DE, FR, GB				
JP 08034856	A2	19960206	JP 1994-191076	1994 0721 <--
JP 3453431	B2	20031006		
US 5567789	A	19961022	US 1995-502447	1995 0714 <--

PRIORITY APPLN. INFO.: JP 1994-191076 A 1994 0721 <--

AB The title method comprises (I) polymerizing (A) a mixture of cyclic trisiloxane, using as a polymerization initiator (B) a Li metal salt of organosilane or polyorganosiloxane, optionally, in the presence of (C) a mol.-weight regulator selected from H2O or a **silanol** compound, the polymerization taking place in the presence of both (D) a nitrile compound for restraining side reactions and (E) an active H-free polar solvent; and (II) terminating the polymerization reaction **product** from step (I) with a neutralizing agent selected from an acid or an organohalosilane. Polydimethylsiloxane was made using Li adduct of siloxane diol oligomer, acetonitrile inhibitor of side reactions, acetic acid chain terminator, and DMF solvent, and having number-average mol. weight 29,411, mol. weight distribution 1.05, and dimethylsiloxane (d.p. ≤25) content 660 ppm.

IT **10605-40-0**
(chain terminator via Li **silanolate** neutralization; nitrile side reaction inhibitor in **preparation** of polydimethylsiloxane containing low amount siloxane oligomer)

RN 10605-40-0 HCAPLUS
CN Silane, chloro(3-chloropropyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM C08G077-08
ICS C08G077-06
CC 35-7 (Chemistry of Synthetic High Polymers)
IT Polymerization
(nitrile side reaction inhibitor in **preparation** of polydimethylsiloxane containing low amount siloxane oligomer)
IT Siloxanes and Silicones, **preparation**
(di-Me, di-Ph, nitrile side reaction inhibitor in **prepn** . of polydimethylsiloxane containing low amount siloxane oligomer)
IT 64-19-7, Acetic acid, uses 79-09-4, Propionic acid, uses 79-10-7, Acrylic acid, uses 124-38-9, Carbon dioxide, uses 1066-35-9, Dimethylchlorosilane 1719-58-0, Dimethylvinylchlorosilane 7647-01-0, Hydrochloric acid, uses 7664-93-9, Sulfuric acid, uses **10605-40-0** 24636-31-5, Methacryloxypropyldimethylchlorosilane
(chain terminator via Li **silanolate** neutralization; nitrile side reaction inhibitor in **preparation** of polydimethylsiloxane containing low amount siloxane oligomer)
IT 109-72-8D, n-Butyllithium, reaction **product** with siloxane oligomer 17574-46-8 58556-58-4 106211-26-1 174614-54-1 174614-55-2 174614-56-3 174614-57-4 174614-58-5 174614-59-6 174614-60-9
(nitrile side reaction inhibitor in **preparation** of polydimethylsiloxane containing low amount siloxane oligomer)
IT 25084-99-5DP, Hexamethylcyclotrisiloxane homopolymer, hydroxy group-terminated 31692-79-2P
(nitrile side reaction inhibitor in **preparation** of polydimethylsiloxane containing low amount siloxane oligomer)
IT 75-05-8, Acetonitrile, uses 78-82-0, Isobutyronitrile 107-12-0, Propionitrile 109-74-0, Butyronitrile 110-59-8, Valeronitrile 110-61-2, Succinonitrile 140-29-4, α-Tolunitrile
(nitrile side reaction inhibitor in **preparation** of polydimethylsiloxane containing low amount siloxane oligomer)

L15 ANSWER 24 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1994:186764 HCAPLUS
DOCUMENT NUMBER: 120:186764
TITLE: Shielded stationary phases for liquid chromatography or extraction of mixtures containing proteins and small analytes
INVENTOR(S): Feibush, Binyamin; Gisch, Daryl J.
PATENT ASSIGNEE(S): S.A.C. Corp., USA
SOURCE: U.S., 19 pp. Cont. of U.S. Ser. No. 557,333, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

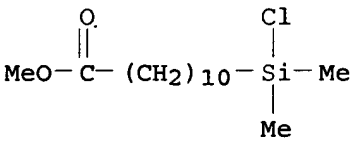
US 5277813	A	19940111	US 1992-988610 <--	1992 1210
PRIORITY APPLN. INFO.:			US 1988-208200 <--	B2 1988 0617
			US 1990-557333 <--	B1 1990 0723

AB Novel packing materials are provided for liquid chromatog. and/or solid-phase extraction columns which will allow direct injection of biol. fluids for separation of small analytes from protein-containing mixts. These packing materials have a hydrophilic exterior layer and a hydrophobic, charged, or otherwise selective portion that forms an underlayer or is embedded in the hydrophilic layer. During a chromatog. **process**, large water-soluble biopolymers will be in contact with the hydrophilic outer layer and be shielded from interacting with the underlayer or embedded portion and elute unretained. Small analytes, on the other hand, can be fully partitioned throughout the exterior and interior layers and are retained by hydrophobic or electrostatic interactions. Silica- and silica gel-bonded phases were **prepared** [e.g., N,N-bis(2'-methoxyethyl)-11-(triethoxysilyl)undecylamine was **prepared** and bonded to silica gel] and used in the direct analyses of drugs in plasma or serum samples.

IT **53749-38-5**
(reaction of, in **preparation** of shielded stationary phase for HPLC anal. of drugs in human blood serum)

RN 53749-38-5 HCAPLUS

CN Undecanoic acid, 11-(chlorodimethylsilyl)-, methyl ester (9CI) (CA INDEX NAME)



IC ICM B01D015-08

INCL 210502100

CC 9-3 (Biochemical Methods)
Section cross-reference(s): 1, 4, 29, 66

IT 50-06-6, analysis 50-47-5, Desipramine 51-06-9, Procainamide 56-54-2, Quinidine 56-75-7, Chloramphenicol 58-08-2, analysis 58-55-9, Theophylline, analysis 58-93-5, Hydrochlorothiazide 65-85-0, Benzoic acid, analysis 66-22-8, Uracil, analysis 69-72-7, analysis 76-57-3, Codeine 103-90-2, Acetaminophen 298-46-4, Carbamazepine 525-66-6, **Propranolol** 738-70-5 15687-27-1, Ibuprofen
(determination of, in human blood serum by HPLC using shielded stationary phases)

IT 111-26-2, Hexylamine 124-09-4, 1,6-Hexanediamine, uses 2052-49-5, Tetrabutylammonium hydroxide

(in **preparation** of shielded stationary phase for HPLC anal. of drugs in human blood serum)
IT 116047-42-8P, 11-Triethoxysilylundecanal
(**preparation** and reaction of, in **preparation** of shielded stationary phase for HPLC anal. of drugs in human blood serum)
IT 7631-86-9DP, Silica, reaction **products** with hydrophobic compds. having polar functionality 40762-31-0DP, reaction **products** with Supelcosil silica and propane sultone 95752-11-7DP, Supelcosil DB, reaction **products** with hydrophobic compds. having polar functionality 153632-55-4DP, reaction **products** with silica gel 153632-57-6DP, reaction **products** with silica gel
(**preparation** of, as shielded stationary phase for HPLC anal. of drugs in human blood serum)
IT 108-30-5, Succinic anhydride, analysis 111-95-5, Bis(2-methoxyethyl)amine 1120-71-4, 1,3-Propane sultone 2489-52-3, 3-Fluorosulfonylbenzenesulfonyl chloride 2530-86-1 13822-56-5, 3-Aminopropyltrimethoxysilane 20493-87-2, N-(2-Aminoethyl)-3-aminopropyltrimethylsilane 35141-36-7, N-(3-Trimethoxysilylpropyl)trimethylammonium chloride 40762-30-9 **53749-38-5** 71245-36-8, Hypol FHP 2000 72876-91-6 105053-76-7, AZ-CUP MC 147366-30-1, N-(3-Trimethoxysilylpropyl)tributylammonium bromide 153632-56-5, N-Hydroxysuccinimido 11-(triethoxysilyl)undecanoate
(reaction of, in **preparation** of shielded stationary phase for HPLC anal. of drugs in human blood serum)
IT 112-45-8, 10-Undecenal
(reaction of, with triethoxysilane, in **preparation** of shielded stationary phase for HPLC anal. of drugs in human blood serum)
IT 998-30-1, Triethoxysilane
(reaction of, with undecenal, in **preparation** of shielded stationary phase for HPLC anal. of drugs in human blood serum)

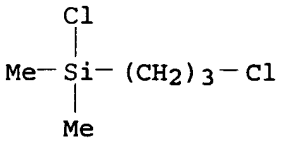
L15 ANSWER 25 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1992:583782 HCAPLUS
DOCUMENT NUMBER: 117:183782
TITLE: **Preparation** of well-engineered thin molecular layers on semiconductor-based transducers
AUTHOR(S): Jaffrezic-Renault, N.; Martelet, C.
CORPORATE SOURCE: Lab. Physicochem. Interfaces, Ec. Cent. Lyon, Ecully, F-69131, Fr.
SOURCE: Sensors and Actuators, A: Physical (**1992**), A32(1-3), 307-12
CODEN: SAAPEB; ISSN: 0924-4247
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB Chemical and biochem. sensors, based on semiconductor substrates such as ISFETs, enzymic FETs (ENFETs) or capacitive immunosensors, need as a sensing part a structure exhibiting good mol. or ionic recognition properties associated with a stability allowing a long lifetime. In order to achieve such requirements the authors developed direct chemical grafting techniques onto active or passive electronic components such as FET or electrolyte oxide semiconductor (EOS) capacitors. Examples of ISFETs (Ag+, Ca2+, NO3-), ENFETs (urea, glucose) and immunosensors (IgG, IgE) are given to emphasize the advantages of this direct coupling **process** of a monomol. layer onto a semiconductor-based

transducer.

IT **10605-40-0**
(reaction of, with **silanol** groups on silicon surface, for ionophore fixation in **preparation** of sensors)

RN 10605-40-0 HCAPLUS

CN Silane, chloro(3-chloropropyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



CC 79-2 (Inorganic Analytical Chemistry)
Section cross-reference(s): 9, 15, 76

ST thin mol layer **prepn** semiconductor transducer; review thin mol layer semiconductor sensor; grafting technique semiconductor transducer surface; FET sensor monomol layer film **prepn**; sensor semiconductive thin mol layer **prepn** ; biosensor semiconductive monomol layer film **prepn**; immunosensor semiconductive monomol layer film **prepn**

IT Immunoassay
(grafting technique for **preparation** of well-engineered thin mol. layers on capacitor for)

IT Semiconductor devices
(grafting technique for **preparation** of well-engineered thin mol. layers on, for anal.)

IT Sensors
(semiconductor-based, grafting technique for **preparation** of well-engineered thin mol. layers for, for anal.)

IT Immunoglobulins
(E, determination of, grafting technique for **preparation** of well-engineered thin mol. layers on capacitor for)

IT Immunoglobulins
(G, determination of, grafting technique for **preparation** of well-engineered thin mol. layers on capacitor for)

IT Transistors
(field-effect, grafting technique for **preparation** of well-engineered thin mol. layers on, for anal.)

IT 50-99-7, Glucose, analysis 57-13-6, Urea, analysis 7440-22-4, Silver, analysis 7440-70-2, Calcium, analysis 14797-55-8, Nitrate, analysis 16637-16-4, Uranyl ion(2+)
(determination of, grafting technique for **preparation** of well-engineered thin mol. layers on FET for)

IT 111-30-8, Pentanedial
(reaction of, with silanized silicon surface, for protein fixation in **preparation** of calcium sensor)

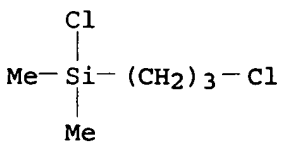
IT 141630-76-4 143982-95-0
(reaction of, with silanized silicon surface, in **prepn** . of calcium sensor)

IT 143982-94-9
(reaction of, with silanized silicon surface, in **prepn** . of uranyl sensor)

IT 3663-43-2
(reaction of, with **silanol** groups on silicon surface, for fixation of biospecific mols. in **preparation** of sensors)

IT **10605-40-0**
(reaction of, with **silanol** groups on silicon surface, for ionophore fixation in **preparation** of sensors)
IT 22705-32-4D, derivs.
(reaction of, with **silanol** groups on silicon surface, in **preparation** of sensors)

L15 ANSWER 26 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1992:476362 HCAPLUS
DOCUMENT NUMBER: 117:76362
TITLE: Novel silicones for transdermal therapeutic system. III. **Preparation** of pyridinio- or ammonio-terminated polydimethylsiloxanes and the evaluation as transdermal penetration enhancers
AUTHOR(S): Aoyagi, Takao; Nakamura, Tomoko; Yabuchi, Yuichi; Nagase, Yu
CORPORATE SOURCE: Sagami Chem. Res. Cent., Sagamihara, 229, Japan
SOURCE: Polymer Journal (Tokyo, Japan) (**1992**), 24(6), 545-53
CODEN: POLJB8; ISSN: 0032-3896
DOCUMENT TYPE: Journal
LANGUAGE: English
AB α-[3-(1-Pyridinio)propyl]polydimethylsiloxane iodide (PDMS-Py+I- and α-[3-(N,N-dimethylethylammonio)propyl]polydimethylsiloxane iodide (PDMS-Am+I-) were **prepared** from PDMS containing iodopropyl group at the chain end. The **prepolymer** was **synthesized** by a ring-opening polymerization of hexamethylcyclotrisiloxane (D3) initiated with lithium **trimethylsilanolate** followed by the termination with 3-chloropropyldimethylchlorosilane and the halogen substitution with NaI. All the polymers effectively enhanced the drug penetration through the skin and the permeation coeffs. were about 2-6 times as much as that without enhancer. It was revealed from the detailed anal. of the permeation profile that the permeation and partition coeffs. increased in parallel, with increasing of the average degree of polymerization, while the diffusion coeffs. were unchanged.
IT **10605-40-0DP**, 3-Chloropropyldimethylchlorosilane, reaction **products** with hexamethylcyclotrisiloxane
(**preparation** and chloride substitution reaction of)
RN 10605-40-0 HCAPLUS
CN Silane, chloro(3-chloropropyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



CC 63-5 (Pharmaceuticals)
Section cross-reference(s): 35
IT Siloxanes and Silicones, biological studies
(di-Me, quaternary ammonium group-containing, **preparation** and evaluation as transdermal penetration enhancer of)
IT Pharmaceutical dosage forms

(transdermal, penetration enhancers for, quaternary ammonium-containing polydimethylsiloxanes as, **preparation** and evaluation of)

IT **10605-40-0DP**, 3-Chloropropyldimethylchlorosilane, reaction **products** with hexamethylcyclotrisiloxane
(**preparation** and chloride substitution reaction of)

IT 110-86-1DP, Pyridine, reaction **products** with polydimethylsiloxane 598-56-1DP, N,N-Dimethylethylamine, reaction **products** with polydimethylsiloxane 9016-00-6DP, Poly[oxy(dimethylsilylene)], ammonio- and pyridinio-terminated
(**preparation** and evaluation as transdermal penetration enhancer of)

IT 25084-99-5DP, ammonio- and pyridinio-terminated
(**preparation** and evaluation as transdermal penetration enhancer of)

L15 ANSWER 27 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1992:210721 HCAPLUS
DOCUMENT NUMBER: 116:210721
TITLE: Fluorescent porphyrin and fluorescent phthalocyanine-polyethylene glycol, -polyol, and saccharide derivatives as fluorescent probes
INVENTOR(S): Arrhenius, Peter Olof Gustaf
PATENT ASSIGNEE(S): Diatron Corp., USA
SOURCE: PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 9
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9118006	A1	19911128	WO 1991-US3424	1991 0515
			<--	
W: CA, FI, JP, NO				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, LU, NL, SE				
CA 2082936	AA	19911116	CA 1991-2082936	1991 0515
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CA 2082936	C	20030923		
EP 529002	A1	19930303	EP 1991-912121	1991 0515
			<--	
EP 529002	B1	20011004		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
JP 05508015	T2	19931111	JP 1991-511180	1991 0515
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JP 3224538	B2	20011029		
US 5403928	A	19950404	US 1991-701449	1991

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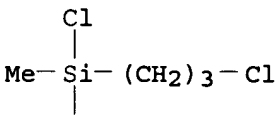
AT 206395	E	20011015	AT 1991-912121		
					1991
					0515
			<--		
ES 2163393	T3	20020201	ES 1991-912121		
					1991
					0515
			<--		
PRIORITY APPLN. INFO.:			US 1990-523601	A	
					1990
					0515
			<--		
			US 1991-701449		
					1991
					0515
			<--		
			WO 1991-US3424	W	
					1991
					0515
			<--		

AB Marker components are **prepared** which are compatible with aqueous solns., exhibit favorable fluorescence properties, and exhibit decreased nonspecific binding to macromols. in solution These markers are useful for e.g. fluorescence immunoassays. A digoxigenin probe was **prepared** by conjugating 2,3-dicarboxyphthalocyaninato-bis[3-(1H-imidazol-1-ylcarbonyl) **aminopropyldimethylsilanolato**]silicon (**preparation** given) with amine-terminated PEG (**preparation** given). The **product** was further conjugated with 3-dl-aminodigoxigenin. The **product** gave an immunospecific reaction with a specific digoxin antibody.

IT **10605-40-0**
(reaction of, in conjugate fluorescent probe **preparation**)

RN 10605-40-0 HCAPLUS

CN Silane, chloro(3-chloropropyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IC C07J043-00; C07D209-56; C07D487-22; C07H023-00

CC 9-5 (Biochemical Methods)
Section cross-reference(s): 15, 29

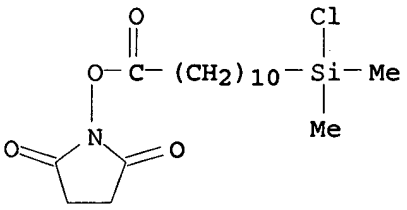
IT **Alcohols**, compounds
(polyhydric, conjugates, with fluorophores, for fluorescent probes)

IT 3468-11-9P 19333-15-4P 25322-68-3DP, amine-terminated 97241-14-0P 140871-08-5P 140871-09-6P 140871-10-9P 140889-30-1P 140890-47-7P
(**preparation** and reaction of, in conjugate fluorescent probe **preparation**)

IT 448-65-7DP, Deuteroporphyrin, mannitol esters 83830-83-5DP, reaction **products** with fluorophore-PEG derivative conjugate

140871-07-4P 140871-09-6DP, amine-terminated PEG conjugates
140888-76-2P 140889-30-1DP, amine-terminated PEG conjugates
140890-46-6P 140907-65-9P 140935-72-4P
(**preparation** of, for fluorescent probe)
IT 69-65-8, Mannitol 91-15-6, Phthalonitrile 288-32-4, Imidazole, reactions 448-65-7, Deuteroporphyrin 10026-04-7, Silicon tetrachloride **10605-40-0** 14459-29-1, Hematoporphyrin IX 15554-15-1, Hydroxyaluminum phthalocyanine 17070-70-1, 3-Isocyanatopropyldimethylchlorosilane 27879-07-8, Polyethyleneglycol monoethyl ether 83830-83-5 140890-48-8
(reaction of, in conjugate fluorescent probe **preparation**)
IT 108-30-5, reactions
(reaction of, with phthalocyanine derivative in conjugate fluorescent probe **preparation**)

L15 ANSWER 28 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1992:173516 HCAPLUS
DOCUMENT NUMBER: 116:173516
TITLE: Supramolecular asymmetric induction with a NADH model reagent grafted on silica
AUTHOR(S): Losset, D.; Dupas, G.; Duflos, J.; Bourguignon, J.; Queguiner, G.
CORPORATE SOURCE: Lab. Chim. Org. Fine Heterocyclique, INSA, Mont-Saint Aigman, 76131, Fr.
SOURCE: Bulletin de la Societe Chimique de France (**1991**), (Sept.-Oct.), 721-9
CODEN: BSCFAS; ISSN: 0037-8968
DOCUMENT TYPE: Journal
LANGUAGE: French
OTHER SOURCE(S): CASREACT 116:173516
AB A model of NADH issued from a thieno[2,3-b]dihydropyridine derivative has been grafted onto a silica matrix bearing on another part a chiral auxiliary. Two strategies were implemented to obtain the corresponding reagents. In the first case, the reagent and the auxiliary were grafted to the silica by means of two different arms. In the second case, the reagent and the auxiliary were linked to two arms which are brought together before being linked to the silica matrix. The reagents thus obtained were involved in the reduction of Me phenylglyoxylate and enantiomeric excesses of 20 and 35% were obtained.
IT **139764-32-2P**
(**preparation** and reaction of, with silica)
RN 139764-32-2 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[[11-(chlorodimethylsilyl)-1-oxoundecyl]oxy]- (9CI) (CA INDEX NAME)



CC 23-7 (Aliphatic Compounds)
Section cross-reference(s): 22
IT 139764-37-7P
(**preparation** and condensation of, with

dimethylphenylalaninol)
IT 7766-49-6P 110661-49-9P 139764-38-8P
(**preparation** and hydrosilylation of)
IT 139764-35-5DP, reaction **products** with silica and (chlorodimethylsilyl)iododecane 139764-40-2DP, silica-bound
(**preparation** and reaction of, with carbamoylthienopyridine)
IT 139764-34-4DP, reaction priducts with silica and [[[(chlorosilyl)decyl]carbonyl]oxy]succinimide 139764-43-5DP, reaction **products** with silica and hydroxy(iodoundecyl)silane
(**preparation** and reaction of, with dimethylphenylalaninol)
IT **139764-32-2P** 139764-33-3P 139764-39-9P
(**preparation** and reaction of, with silica)
IT 139764-36-6DP, reaction **products** with silica and hydroxy[[(alanylcarbonyl)oxy)decylsilane 139764-41-3DP, silica-bound
(**preparation** and reduction by, of glyoxylate)
IT 140168-98-5DP, silica-bound
(**preparation** and reduction of)
IT 140168-99-6DP, reaction **products** with silica and hydroxy[[[[(dimethylamino)propyl]oxy]carbonyl]decyl]silane
(**preparation** and regioselective reduction of)
IT 15206-55-0P 20698-91-3P 21210-43-5P
(**preparation** of)
IT 1931-60-8
(sequential reactions of, with **bromoundecanol** and hydroxydodecanoic acid)

L15 ANSWER 29 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1991:164493 HCAPLUS
DOCUMENT NUMBER: 114:164493
TITLE: **Preparation** of (chlorodimethylsilyl)carboxylic acid trialkylsilyl esters
INVENTOR(S): Tezuka, Yasushi; Imai, Kiyokazu
PATENT ASSIGNEE(S): Toshiba Silicone Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02282389	A2	19901119	JP 1989-102358	19890421

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PRIORITY APPLN. INFO.: JP 1989-102358 19890421

<--

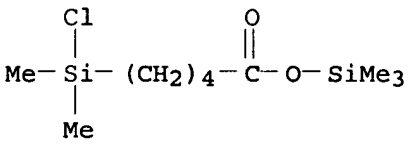
OTHER SOURCE(S): MARPAT 114:164493
AB ClSiMe2ZCO2SiMe2R (I: R = C1-4 alkyl; Z = C1-6 hydrocarbylene containing no aliphatic unsatd. bond), useful as synthetic intermediates and coupling agents, were **prepared** Me3SiCl was gradually added to a mixture of CH2:CHCH2CO2H, Et2O, and Et3N at 0° and

the reaction mixture was refluxed for 2 h to give 65% CH2:CHCH2CO2SiMe3 which was treated with HSiClMe2 and Pt/C while gradually heating to 45° and refluxing the mixture for 2 h to give 53% I [R = Me, Z = (CH2)3].

IT **130200-19-0P**
(**preparation** of, as coupling agent)

RN 130200-19-0 HCAPLUS

CN Pentanoic acid, 5-(chlorodimethylsilyl)-, trimethylsilyl ester (9CI) (CA INDEX NAME)



IC ICM C07F007-18

CC 29-6 (Organometallic and Organometalloidal Compounds)

IT Carboxylic acids, esters
(silyl, esters, with **trialkylsilanols**, **prepn**. of, as coupling agents)

IT 13688-54-5P 23523-56-0P
(**preparation** and hydrosilylation of, with dimethylchlorosilane)

IT 130200-18-9P **130200-19-0P**
(**preparation** of, as coupling agent)

L15 ANSWER 30 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1991:143533 HCAPLUS

DOCUMENT NUMBER: 114:143533

TITLE: Fast atom bombardment mass spectrometry of some alkoxy- and chlorosilanes

AUTHOR(S): Kallury, Krishna M. R.; Krull, Ulrich J.; Thompson, Michael

CORPORATE SOURCE: Dep. Chem., Univ. Toronto, Toronto, ON, M5S 1A1, Can.

SOURCE: Organic Mass Spectrometry (**1991**), 26(2), 81-4
CODEN: ORMSBG; ISSN: 0030-493X

DOCUMENT TYPE: Journal

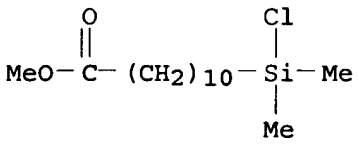
LANGUAGE: English

AB The pos. and neg. FAB mass spectra of a series of alkoxy- and chlorosilanes Xm(CH3)3-mSi(CH2)nR [m = 1 or 3, n = 3, 10 or 17, X = Cl or OMe or OEt, R = Me, NH2, glycidoxy, CO2Me, NHCO(CH2)7CO2Me or NHCO(CH2)10CH2OAc] were recorded in NBA and NPOE matrixes. The chlorosilanes underwent rapid hydrolysis into **silanols** which condense to form siloxanes, the **process** being complete in NBA and partial in NPOE, yielding siloxane-based fragment ions in the pos. spectra and silyloxyanions in the neg. spectra. The alkoxysilanes were more resistant to hydrolysis, affording abundant [MH-HX]+ ions (X = OMe or OEt) in their pos. FAB spectra and moderate to high intensity [M-H]- ions in the neg. mode, the latter undergoing characteristic sequential loss of C2H4, EtOH and C2H4. Significant variations were observed in the pos. spectra of all the silanes with change of matrix.

IT **53749-38-5**
(pos. FAB mass spectrum of)

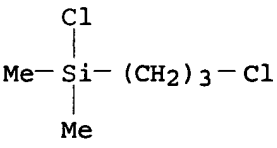
RN 53749-38-5 HCAPLUS

CN Undecanoic acid, 11-(chlorodimethylsilyl)-, methyl ester (9CI) (CA INDEX NAME)



CC 29-6 (Organometallic and Organometalloidal Compounds)
IT 112-04-9 919-30-2 2530-83-8 18306-79-1 18643-08-8
53749-38-5 58160-70-6 132933-18-7 132933-19-8
(pos. FAB mass spectrum of)

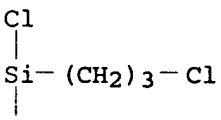
L15 ANSWER 31 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1989:632954 HCAPLUS
DOCUMENT NUMBER: 111:232954
TITLE: The modification of reactivity at a silicon center by a remote phosphorus group
AUTHOR(S): Kowalski, Jozef; Chojnowski, Julian
CORPORATE SOURCE: Cent. Mol. Macromol. Stud., Pol. Acad. Sci., Lodz, 90-362, Pol.
SOURCE: Journal of Organometallic Chemistry (**1988**), 356(3), 285-95
CODEN: JORCAI; ISSN: 0022-328X
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 111:232954
AB The compds. X(CH2)nSiMe2(OPh) [X = H, n = 2, 3; X = PPh2, n = 1, 2, 3; X = P(O)Ph2, n = 2, 3; X = P(S)Ph2, n = 1, 2, 3] having Si and P bridged by C chains, have been **synthesized.** The kinetics of acid- and base-catalyzed solvolytic cleavage of the phenoxyl group from these compds. in **methanol** have been investigated. The kinetic results obtained in the presence of bases can be interpreted in terms of polar and steric effects alone, but there was an unexpected enhancement of the reactivity in the case of the P:O-containing substrates in acidic media. The solvent kinetic isotope effects are best interpreted in terms of participation by the P:O group as a base rather than as a nucleophile attacking the Si center.
IT **10605-40-0**
(phenoxy substitution of)
RN 10605-40-0 HCAPLUS
CN Silane, chloro(3-chloropropyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



CC 29-6 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 22, 67
IT 4028-23-3 6917-76-6 **10605-40-0** 17477-29-1
(phenoxy substitution of)

IT 124007-96-1P
(**preparation** and reaction of, with chlorophosphines)
IT 66998-68-3P
(**preparation** and reaction of, with phosphines)
IT 17876-92-5P 103676-01-3P 103676-03-5P 124007-89-2P
124007-90-5P 124007-91-6P 124007-92-7P 124007-93-8P
124007-94-9P 124007-95-0P
(**preparation** and solvolysis of, kinetics of)

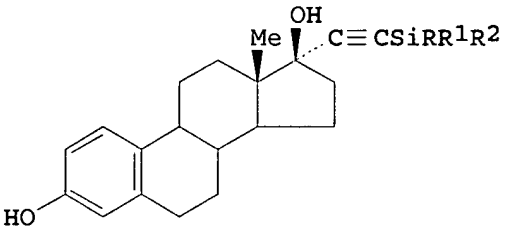
L15 ANSWER 32 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1989:574221 HCAPLUS
DOCUMENT NUMBER: 111:174221
TITLE: **Synthesis** of siloxyphosphines
AUTHOR(S): Urbaniak, W.; Marciniec, B.
CORPORATE SOURCE: Fac. Chem., A. Mickiewicz Univ., Poznan, 60-780, Pol.
SOURCE: Synthesis and Reactivity in Inorganic and Metal-Organic Chemistry (**1988**), 18(7), 695-703
CODEN: SRIMCN; ISSN: 0094-5714
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 111:174221
AB Siloxyphosphines [Ph2P(CH2)nSiMe2]2O (n = 1, 3) were **prepd**. by phosphidation of X(CH2)nSiMe2OEt (X = Br, n = 1; X = Cl, n = 3) with Ph2PLi followed by hydrolysis. Free-radical addition of Ph2PH to suitable vinylsiloxanes yielded (Ph2PCH2CH2SiMe2)2O and (Ph2PCH2CH2SiMe2O)2SiMeCH2CH2PPh2.
IT **10605-40-0**
(hydrolysis and **ethanolysis** of)
RN 10605-40-0 HCAPLUS
CN Silane, chloro(3-chloropropyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



CC 29-7 (Organometallic and Organometalloidal Compounds)
IT **10605-40-0** 16532-02-8, (Bromomethyl)chlorodimethylsilane
(hydrolysis and **ethanolysis** of)
IT 2351-13-5P 18132-72-4P
(**preparation** and phosphidation of)
IT 110547-70-1P, Bis(diphenylphosphinomethyl)tetramethyldisiloxane
110547-71-2P 110547-72-3P 110547-73-4P
(**preparation** of)
IT 13508-63-9P 18156-50-8P
(**preparation**, phosphidation, and subsequent hydrolysis of)

L15 ANSWER 33 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1987:138687 HCAPLUS
DOCUMENT NUMBER: 106:138687
TITLE: Steroidal silicon side-chain analogs as potential antifertility agents
AUTHOR(S): Peters, Richard H.; Crowe, David F.; Tanabe, Masato; Avery, Mitchell A.; Chong, Wesley K.

M.
CORPORATE SOURCE: Bio-Org. Chem. Lab., SRI Int., Menlo Park, CA, 94025, USA
SOURCE: Journal of Medicinal Chemistry (1987), 30(4), 646-52
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 106:138687
GI



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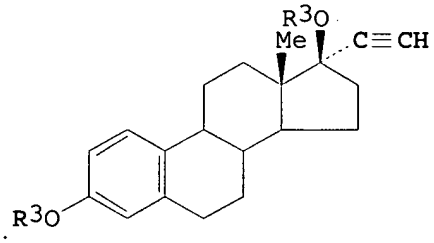
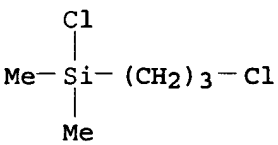


II

AB Ethynylestradiol Si analogs I [SiRR1R2 = SiMe3, SiEt3, SiPr3, SiEt3(CMe3), SiMe2Pr, etc.] were **prepared** by the reaction of ethynylestradiols II (R3 = H, THP) with ClSiRR1R2 in the presence of MeMg Br or BuLi followed by acid- catalyzed **methanolysis.** I exhibit high antifertility potency and markedly reduced estrogenic activity. The best compds. are I (R-R2 = Et; R = R1 = Me, R2 = CMe3), which show a separation of antifertility from estrogenic activity in rats. Structure-activity studies indicated a good correlation between biol. activities and calculated van der Waals vols. of R, R1, and R2.

IT **10605-40-0**
(silylation by, of ethynylestradiol)
RN 10605-40-0 HCAPLUS
CN Silane, chloro(3-chloropropyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



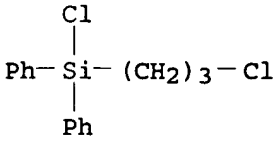
CC 32-3 (Steroids)
Section cross-reference(s): 1
ST ethynylestradiol silicon analog **prepn** antifertility;

estradiol ethynyl silicon analog
IT 19-Norsteroids
(silicon side-chain analogs, **preparation** and antifertility activities of)
IT 597-49-9, 3-Ethyl-3-**pentanol**
(chlorination of)
IT 57-63-6DP, silyl derivs.
(**preparation** and antifertility activities of)
IT 50866-93-8P 50866-94-9P 50866-95-0P 50866-96-1P
50866-97-2P 50866-98-3P 50866-99-4P 50867-00-0P
50867-01-1P 50867-02-2P 50867-03-3P 50867-04-4P
50867-05-5P 50867-06-6P 50867-07-7P 50867-08-8P
50867-09-9P 50867-10-2P 50867-11-3P 50867-12-4P
50938-72-2P 50938-73-3P 57099-89-5P 57099-90-8P
57099-91-9P 57099-92-0P 57099-93-1P 57099-94-2P
107149-27-9P 107149-28-0P 107149-29-1P 107149-30-4P
107149-31-5P 107149-32-6P 107149-33-7P 107149-34-8P
107149-35-9P 107149-36-0P 107149-37-1P 107149-38-2P
107149-39-3P 107149-40-6P 107149-41-7P 107149-42-8P
107149-43-9P 107149-44-0P 107149-45-1P 107149-46-2P
107149-47-3P 107149-48-4P 107149-49-5P 107149-50-8P
107149-51-9P 107149-52-0P 107149-53-1P 107173-94-4P
107173-95-5P 107173-96-6P
(**preparation** and antifertility activity of)
IT 919-23-3P, 3,3-Diethyl-1-pentyne
(**preparation** and reaction of, with estrone tetrahydropyranyl ether)
IT 994-25-2P, 3-Chloro-3-ethylpentane
(**preparation** and reaction of, with vinyl chloride)
IT 75-77-4, Trimethylsilyl chloride, reactions 76-86-8, Triphenylsilyl chloride 768-33-2 994-30-9 995-04-0
995-25-5 995-45-9, Tributylsilyl chloride 1000-50-6
1481-41-0 1719-57-9 1833-31-4 3634-56-8 4028-23-3
7787-82-8 **10605-40-0** 16532-02-8 17477-29-1
17876-59-4 18148-37-3 18162-48-6 18163-33-2 18171-56-7
18171-59-0 18279-72-6 18293-66-8 19923-52-5 57099-95-3
60090-96-2 107149-54-2 107149-55-3 107149-56-4 107149-57-5
(silylation by, of ethynylestradiol)

L15 ANSWER 34 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1980:42039 HCAPLUS
DOCUMENT NUMBER: 92:42039
TITLE: Sila drugs. 11. Diphenyl(3-piperidinopropyl) **silanol**, a sila analog of diphenidol
AUTHOR(S): Steiling, Lothar; Tacke, Reinhold; Wannagat, Ulrich
CORPORATE SOURCE: Inst. Anorg. Chem., Tech. Univ. Braunschweig, Braunschweig, D-3300, Fed. Rep. Ger.
SOURCE: Liebigs Annalen der Chemie (**1979**), (10), 1554-9
CODEN: LACHDL; ISSN: 0170-2041
DOCUMENT TYPE: Journal
LANGUAGE: German
OTHER SOURCE(S): CASREACT 92:42039
AB Successive Grignard reaction of Cl3Si(CH2)3Cl with PhMgCl gave Ph2SiCl(CH2)3Cl, successive amine substitution of which with piperidine (QH) gave Ph2SiQ(CH2)3Q (I). Hydrolysis of I gave Ph2Si(OH)(CH2)3Q (II), a sila analog of difenidol, which was quaternized with MeI. The LD50 for II in the guinea pig was 101.6 mg/kg. II was effective as an antiarrhythmic, anticholinergic,

histaminolytic, and muscle relaxant.

IT **2632-94-2P**
(preparation and amine substitution of, with piperidine)
RN 2632-94-2 HCAPLUS
CN Silane, chloro(3-chloropropyl)diphenyl- (7CI, 8CI, 9CI) (CA INDEX NAME)



CC 29-6 (Organometallic and Organometalloidal Compounds)
ST antihistamine **piperidinopropyldiphenylsilanol**; histaminolytic **piperidinopropyldiphenylsilanol**; anticholinergic **piperidinopropyldiphenylsilanol**; spasmolytic **piperidinopropyldiphenylsilanol**; muscle relaxant **piperidinopropyldiphenylsilanol**; antiarrhythmic **piperidinopropyldiphenylsilanol**; parasympatholytic **piperidinopropyldiphenylsilanol**; **silanol** piperidinopropyl diphenyl; difenidol sila analog
IT Antiarrhythmics
Antihistaminics
Muscle relaxants and Spasmolytics
Parasympatholytics
(diphenyl(piperidinylpropyl)**silanols**)
IT 2550-06-3P 3401-26-1P
(**preparation** and Grignard reaction of, with chlorobenzene)
IT **2632-94-2P** 72315-20-9P
(**preparation** and amine substitution of, with piperidine)
IT 72315-21-0P
(**preparation** and hydrolysis of)
IT 72191-17-4P
(**preparation** and quaternization of, with Me iodide)
IT 72315-22-1P
(**preparation** of)

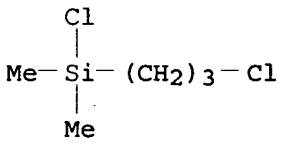
L15 ANSWER 35 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1973:442603 HCAPLUS
DOCUMENT NUMBER: 79:42603
TITLE: Reaction of organosilicon **alcohols** and phenols with phosgene
AUTHOR(S): Mironov, V. F.; Sheludyakov, V. D.; Khatuntsev, G. D.; Kozlikov, V. L.
CORPORATE SOURCE: USSR
SOURCE: Zhurnal Obshchei Khimii (**1973**), 43(3), 616-20
CODEN: ZOKHA4; ISSN: 0044-460X
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB COCl2 reacted at 0-10° with O(SiMe2ZOH)2 (I; Z = CH2, (CH2)3, CH2OCH2CH2) to form O(SiMe2ZO2CCl)2 (II), SiMe2(ZCl)Cl (III), and ClSiMe2ZO2CCl (IV); the ratios were controlled by reactant ratios and the nature of Z. Thus, passing COCl2 into O(SiMe2CH2OH)2 in THF gave mainly 94% II (Z = CH2) also formed in similar yield from liquid COCl2 if the resulting HCl was removed; III was the only by-**product.** The yield of III was

enhanced by residual HCl. I(Z = CH2OCH2CH2) gave IV besides the predominantly formed disiloxane, but minor amts. of ClSiMe2CH2Cl, (CH2O2CCl)2, ClCO2CH2CH2Cl and (CH2Cl)2 were also found. The Si-containing phenols were inert towards COCl2 at moderate-temps. but with added Et3N gave HSiMe2C6H4O2CCl (m- and p-isomers). Similarly were **prepared** (o-ClCO2C6H4SiMe2)2O and (o-ClCO2C6H4OCH2SiMe2)2O, which with the appropriate phenols and Et3N gave (HSiMe2C6H4O)2CO (o- and p-isomers).

IT **10605-40-0P**
(**preparation** of)

RN 10605-40-0 HCAPLUS

CN Silane, chloro(3-chloropropyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



CC 29-6 (Organometallic and Organometalloidal Compounds)

ST phosgene silyl **alc** phenol addn; carbonate silyl

IT 627-11-2P 1719-57-9P 2362-10-9P **10605-40-0P**
18098-85-6P 20160-66-1P 20566-53-4P 32657-05-9P
36131-27-8P 38050-04-3P 38050-06-5P 38050-07-6P
41556-35-8P 41912-68-9P 41912-71-4P 41912-74-7P
41912-76-9P
(**preparation** of)

L15 ANSWER 36 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1961:48296 HCAPLUS

DOCUMENT NUMBER: 55:48296

ORIGINAL REFERENCE NO.: 55:9262i,9263a-i,9264a-d

TITLE: Addition of silicon hydrides to olefinic double bonds. V. The addition to allyl and methallyl chlorides

AUTHOR(S): Ryan, John W.; Menzie, Gerald K.; Speier, John L.

CORPORATE SOURCE: Dow Corning Corp., Midland, MI

SOURCE: Journal of the American Chemical Society (**1960**), 82, 3601-4
CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB cf. CA 54, 10916e. The addition of Cl3SiH (I), MeCl2SiH (II), and Me2ClSiH (III) to CH2:CHCH2Cl (IV) and CH2:CMeCH2Cl (V) was studied. In the presence of H2PtCl6.6H2O (VI), each hydride formed CH2:CHMe (VII) from IV as well as Me3-nClnSi(CH2)3Cl (VIII) and Me3-nClnSiPr (IX). With V, little or no CH2:CMe2 (X) or isobutylsilanes were formed, and high yields of Me3-nClnSiCH2CHMeCH2Cl (XI) were obtained. No adducts isomeric with VIII or XI were detectable. The temperature had no effect on the distribution of **products** or yields between 40 and 140°. With VI as catalyst no reaction between VIII and the Si hydrides occurred under addition conditions. Inasmuch as PhCH2Cl did not react with II and VI nor did V form X, VII possibly formed from IV via a 6-membered ring complex, unfavorable to V owing to orientation of hydride H to the tertiary C atom. IX may have

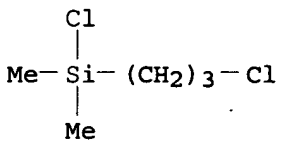
formed by addition of Si hydrides to VII. With excess IV, formation of IX was reduced, not due, apparently, to a reduction in the amount of VII formed. With 0.5% Pd on Al2O3, a mixture of IV and II at reflux gave VII and MeSiCl3 almost quant. Formation of siloxanes or of alkoxysilanes from VIII and XI was straightforward. The chloroalkyl groups were not attacked by dilute acids or bases. Two methods, A and B, were used to **prepare** VIII and XI: Method A: A mixture of 0.5 mole IV, 0.5 mole I, and about 10-5 mole VI was refluxed; During 1 hr. the reflux temperature rose from 35 to 65° and a mixture of 1.1:1 (mole ratio) IV-I was added slowly at 75-80°, the evolved VII and volatilized reactants were trapped and the reactants returned to the flask, and the mixture was distilled to give, from 829 g. I and 421 g. IV, recovered I, 241 g. SICl4, b. 56°, 109 g. IX (n = 3), b. 122-3°, and 768 g. VIII (n = 3). Method B: A mixture of 1150 g. II, 637 g. IV, and 1.1 + 10-5 mole VI was pumped into a 20-ft. coil of 0.5-in. stainless steel in a bath at 125-6° and allowed to leave the coil through a spring-loaded relief valve set to maintain a pressure of 500 lb./sq. in., and at equilibrium a 429-g. sample was collected during 26 min. and analyzed by distillation to give 21 g. VII, 63 g. II, 23 g. IV, 90 g. MeSiCl3, 54 g. IX (n = 2) (b. 125-7°, n25D 1.4221), and 178 g. VIII (n = 2); at a 0.83:1 mole ratio II-IV, the yield of VIII rose to 63%, based on IV consumed. The following chlorosilanes were **prepared** [compound (n), method, % yield, b.p./mm., n25D, d25, and Rn given]: VIII (3), A, 66, 181.5°/750, 1.4638, 1.354, 0.2041; VIII (2), B, 60, 186°/750, 1.4597, 1.199, 0.2278; VIII (1), B, 50, 179°/750, 1.4488, 1.043, 0.2572; XI (3), A, 92, 194°/750, 1.4662, 1.310, 0.2112; XI (2), B, 100, 106°/40, 1.4620, 1.168, 0.2352; XI (1), B, 87, 89°/25, 1.4522, 1.030, 0.2619. Treatment of VIII (n = 2), with excess MeMgBr in Et2O gave 85% VIII (n = 0), b. 151.5°, n25D 1.4288, d25 0.8718, RD 0.2956. Similarly, XI (n = 2) yielded 71% XI (n = 0), b73 93°, n25D 1.4345, d25 0.8769, RD 0.2973; the nuclear magnetic spectrum of the **product** indicated CH2Cl, C-H, C-Me, -SiCH2, and SiMe3 groups. A mixture of 354 g. PhCl2SiH and 200 g. IV was added slowly to 10-5 mole of VI, and the mixture left overnight and distilled to give 144 g. PhSiCl3 (b40 105°), 31.4 g. PhCl2SiPr (b10 105°, n25D 1.5137, d25 1.125, RD 0.2669), and 313 g. PhCl2Si(CH2)3Cl (b10 141-2°, n25D 1.5332, d25 1.241, RD 0.2502). MeOH (550 g.) was added through a glass tube to the bottom of a flask containing 1535 g. VIII (n = 2), at 65° with stirring, the system devolatilized at 150-200 mm., and the mixture distilled through a Vigreux column to yield 1130 g. crude Me(MeO)2Si(CH2)3Cl, not free of hydrolyzable Cl; 100 ml. MeOH was added, the mixture saturated with NH3, filtered, and distilled to give pure material. Data for this compound and alkoxysilanes **prepared** similarly were as follows [starting compound (n), **alc.**, % yield, b.p./mm., n25D, d25, RD]: VIII (3), MeOH, 97, 195°/750, 1.4183, 1.077, 0.2341; VIII (2), MeOH, 78, 185°/750, 1.4242, 1.019, 0.2505; VIII (1), MeOH, 75, 169.5°/751, 1.4283, 0.953, 0.2698; VIII (3), EtOH, 85, 124°/30, 1.4175, 1.002, 0.2512; VIII (2), EtOH, 76, 109°/30, 1.4232, 0.973, 0.2618; VIII (1), EtOH, 69, 87°/30, 1.4270, 0.932, 0.2755; XI (3), MeOH, 90, 202.5°/747, 1.4223, 1.059, 0.2401; XI (2), MeOH, 94, 193.5°/756, 1.4289, 1.009, 0.2555; XI (1), MeOH, 89, 181°/751, 1.4331, 0.948, 0.2741. Treatment of VIII (n = 3) with MeOH on a large scale yielded, in addition to 85% trimethoxy

compound, 5% O[Si(OMe)2(CH2)3Cl]2, b24 188°, n25D 1.4347, d25 1.136, RD 0.2293. Hydrolysis of 600 g. VIII (n = 1) with ice-water, extraction with Et2O, filtration of the dried combined extract and organic layer, and devolatilization gave 539 g. O[SiMe2(CH2)3Cl]2 (XII), b7 128°, n25D 1.4484, d25 0.9958, RD 0.2689. Similar hydrolysis of XI (n = 1) gave quant. O[SiMe2CH2CHMeCH2Cl]2 (XIII), n25D 1.4528, d25 0.9886, RD 0.2733. XIII decomposed during distillation at 13-17 mm., and after 2 hrs. at total reflux, a sample of distillate proved to be ClMe2SiOSiMe2CH2CHMeCH2Cl, b17 105°, n25D 1.4346, d25 1.005, RD 0.2595. Hydrolysis of VIII (n = 1), that was contaminated with IX (n = 1), yielded some PrSiMe2OSiMe2 (CH2)3Cl, b12 104°, n25D 1.4282, d25 0.8997, RD 0.2861. Hydrolysis of 629 g. VIII (n = 2), with ice-water and extraction with C6H6 gave 407 g. [OMeSi(CH2)3Cl]n (XIV), n25D 1.4709, d25 1.171, RD 0.2386, viscosity 190 cs. at 25°. Similar hydrolysis of XI (n = 2) yielded [OMeSiCH2CHMeCH2Cl]n, n25D 1.4700, d25 1.127, RD 0.2475. H2O (5 ml.) added dropwise to a refluxing mixture of 457 g. (Me3Si)2O and 100 g. VIII (n = 1) the cooled mixture washed to pH 7 with dilute NaHCO3 and H2O, and distilled gave recovered excess (Me3Si)2O, 23% Me3SiOSiMe2(CH2)3Cl (b39 98°, n25D 1.4189, d25 0.8991, RD 0.2808), and XII as the remainder. A mixture of 360 g. (Me3Si)2O, 200 g. XIV, and 10 ml. H2SO4 was refluxed overnight, cooled, washed with dilute NH4OH, dried, and distilled to give 11% (Me3SiO)2SiMe(CH2)3Cl (b17 111°, n25D 1.4147, d25 0.9131, and RD 0.2741), and 7% [Me3SiOSiMe(CH2)3Cl]2O (b1 115°, n25D 1.4320, d25 0.9851, RD 0.2633). To a mixture of 651 g. Me3SiCl and 212 g. VIII (n = 3) was added 540 g. iso-PrOH and then 162 g. H2O, the organic layer washed with H2O to pH 7, and distilled to give 94% (Me3SiO)3Si(CH2)3Cl, b100 181°, n25D 1.4108, d25 0.9223, RD 0.2691. XIII (295 g.) at 260-270° for 32 hrs. liberated 10 g. volatile material, which was distilled twice and identified as X by comparison of infrared spectra and vapor pressure data. A mixture of 110 g. XIII and 0.1 g. AlCl3 at 100-135° for 30 min. gave X almost quant. A mixture of 141 g. XIII, 40 g. NaOH, 200 ml. H2O, and 200 ml. EtOH refluxed 4 hrs. yielded from a cold trap 99% methylcyclopropane, identified by the vapor pressure-temperature curve and absence of C:C in the infrared spectrum.

IT **10605-40-0**, Silane, chloro(3-chloropropyl)dimethyl-
(**preparation** of)

RN 10605-40-0 HCAPLUS

CN Silane, chloro(3-chloropropyl)dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



CC 10B (Organic Chemistry: Aliphatic Compounds)

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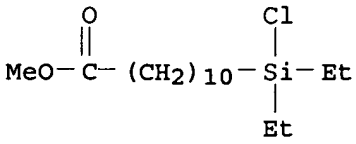
dichloromethylpropyl- 5089-70-3, Silane, (3-chloropropyl)triethoxy- 7787-93-1, Silane, dichloro(3-chloropropyl)methyl- **10605-40-0**, Silane, chloro(3-chloropropyl)dimethyl- 13501-76-3, Silane, (3-chloropropyl)diethoxymethyl- 13508-63-9, Silane, (3-chloropropyl)ethoxydimethyl- 17256-27-8, Silane, (3-chloro-2-methylpropyl)trimethoxy- 17878-20-5, Silane, dichlorophenylpropyl- 17907-74-3, Tetrasiloxane, 3,5-bis(3-chloropropyl)-1,1,1,3,5,7,7,7-octamethyl- 17961-62-5, Disiloxane, 1-(3-chloropropyl)-1,1,3,3-tetramethyl-3-propyl- 17988-66-8, Trisiloxane, 3-(3-chloropropyl)-1,1,1,3,5,5,5-heptamethyl- 18077-31-1, Trisiloxane, 3-(3-chloropropyl)-1,1,1,5,5,5-hexamethyl-3-(trimethylsiloxy)- 18132-72-4, Disiloxane, 1,3-bis(3-chloropropyl)-1,1,3,3-tetramethyl- 18132-73-5, Disiloxane, 1,3-bis(3-chloropropyl)-1,1,3,3-tetramethoxy- 18142-53-5, Silane, trichloro(3-chloro-2-methylpropyl)- 18145-83-0, Silane, chloro(3-chloro-2-methylpropyl)dimethyl- 18171-14-7, Silane, (3-chloropropyl)methoxydimethyl- 18171-19-2, Silane, (3-chloropropyl)dimethoxymethyl- 18244-08-1, Silane, (3-chloro-2-methylpropyl)methoxydimethyl- 18244-20-7, Silane, (3-chloro-2-methylpropyl)dimethoxymethyl- 18244-32-1, Silane, (3-chloro-2-methylpropyl)trimethyl- 18291-27-5, Disiloxane, (3-chloropropyl)pentamethyl- 18388-70-0, Disiloxane, 1,3-bis(3-chloro-2-methylpropyl)-1,1,3,3-tetramethyl- 18881-68-0, Disiloxane, 1-chloro-3-(3-chloro-2-methylpropyl)-1,1,3,3-tetramethyl-
(**preparation** of)

L15 ANSWER 37 OF 37 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1954:64072 HCAPLUS
DOCUMENT NUMBER: 48:64072
ORIGINAL REFERENCE NO.: 48:11303i,11304a-b
TITLE: Some new silicon compounds derived from 10-undecenoic acid
AUTHOR(S): Calas, R.; Duffaut, N.
SOURCE: Bull. mens. inform. ITERG (**1953**), 7, 438-40
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB cf. C.A. 47, 12223h. Exposure of 35 g. Me 10-undecenoate and 150 g. Et2SiHCl 40 hrs. to ultraviolet irradiation yields 14 g. (24%) of Et2SiCl(CH2)10CO2Me (I), colorless, fuming liquid, b1 155-6°, d20 0.9666, n20D 1.485; 98 hrs. irradiation increased the yield to 40%. Hydrolysis at 0° furnishes 2 parts of the corresponding **silanol**, Et2Si(OH)(CH2)10CO2Me (II), and 1 part of a siloxane, O[SiEt2(CH2)10CO2Me]2 (III). II, b. 159°, d20 0.9399, n20D 1.4580, viscosity at 18° 36.6 dynes/cm., III, b1 258-60°, d20 0.9373, n20D 1.4592, saponification value 189.5, mol. weight (in camphor) 577, saponified with 0.5N **alc.** KOH to the corresponding diacid, b1 280-2°, d20 0.9566, n20D 1.4701, acid number = 197. EtSiCl2 gives by an analogous reaction after 40 hrs. of irradiation 16% (32% after 98 hrs.) EtSiCl2(CH2)10CO2Me, b0.7 150-1°, d20 1.0429, n20D 1.4611.
IT **18415-95-7**, Undecanoic acid, 11-(chlorodiethylsilyl)-, methyl ester
(**preparation** of)
RN 18415-95-7 HCAPLUS
CN Undecanoic acid, 11-(chlorodiethylsilyl)-, methyl ester (8CI) (CA

INDEX NAME)



CC 10 (Organic Chemistry)
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(**preparation** of)

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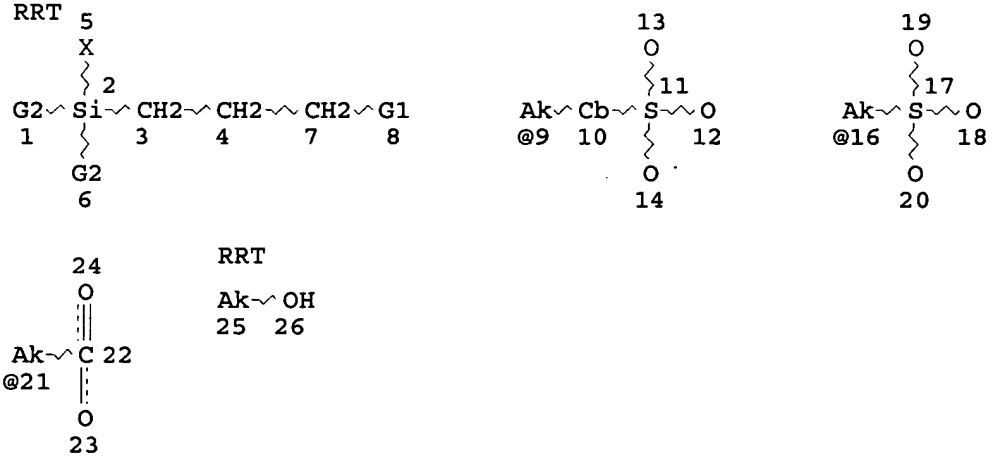
L16 STR



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NUMBER OF NODES IS 25

STEREO ATTRIBUTES: NONE
L18 8 SEA FILE=CASREACT SSS FUL L16 (22 REACTIONS)

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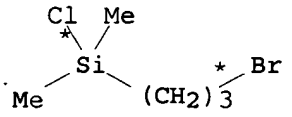
=> d l18 1-8 bib abs fhit

L18 ANSWER 1 OF 8 CASREACT COPYRIGHT 2006 ACS on STN
AN 141:190865 CASREACT
TI Immobilization of chiral phosphine ligands on silica gel by means of the allylsilane method and their use for catalytic asymmetric reactions
AU Aoki, Kazuko; Shimada, Toyoshi; Hayashi, Tamio
CS Department of Chemistry, Graduate School of Science, Kyoto University, Kyoto, Sakyo, 606-8502, Japan
SO Tetrahedron: Asymmetry (2004), 15(11), 1771-1777
CODEN: TASYE3; ISSN: 0957-4166
PB Elsevier Science B.V.
DT Journal
LA English
AB Three chiral phosphine ligands containing an allylsilyl group at the terminus of the side chain were prepared and immobilized on a silica gel surface by use of the allylsilane modification method. The silica-supported chiral phosphine ligands were used for rhodium-catalyzed hydrogenation and palladium-catalyzed allylic alkylation and showed high enantioselectivity.

RX(20) OF 64 COMPOSED OF RX(2), RX(4)
RX(20) **C** + **F** + **N** ===> O



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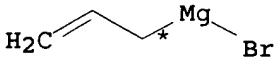

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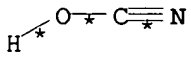
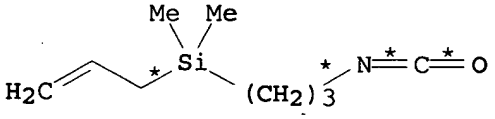


K

2 STEPS

N



O
YIELD 86%

RX(2) RCT C **74349-12-5**, F 1730-25-2

STAGE(1)

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                CON  SUBSTAGE(1) 0 deg C
                     SUBSTAGE(2) 11 hours, room temperature

             STAGE(2)
                RGT  H 12125-02-9 NH4Cl
                SOL  7732-18-5 Water

           PRO  G 738596-95-7
           NTE  Grignard reaction

RX(4)      RCT  G 738596-95-7

             STAGE(1)
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                SOL  68-12-2 DMF
                CON  0.5 hours, 100 deg C

             STAGE(2)
                RCT  N 590-28-3
                CON  0.5 hours, 100 deg C

           PRO  O 738596-97-9
RE.CNT  28    THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT


L18  ANSWER 2 OF 8  CASREACT  COPYRIGHT 2006 ACS on STN
AN   140:43774  CASREACT
TI   Method for preparation of organodialkylalkoxysilane
IN   Ramdani, Kamel; Vogin, Bernard
PA   Rhodia Chimie, Fr.; Rhone Poulenc Chimie
SO   Fr. Demande, 30 pp.
     CODEN: FRXXBL
DT   Patent
LA   French
FAN.CNT 1
     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
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PI   FR 2841245         A1   20031226      FR 2002-7713     20020621
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     FR 2841244         A1   20031226      FR 2002-15114    20021202
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             KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK,
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             SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG,
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             DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL,
             PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN,
             GQ, GW, ML, MR, NE, SN, TD, TG
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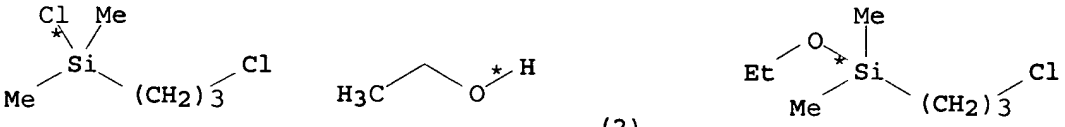
	FR 2002-15114	20021202			
	EP 2003-760774	20030623			
	WO 2003-FR1921	20030623			

OS MARPAT 140:43774

AB The preparation of organodialkylalkoxysilane is carried out by reactive distillation of an ω-haloalkyldialkylhalosilane in the presence of an alkanol. The stage of reactive distillation is implemented in a column in the presence or absence of nonreactive solvent with the removal of HCl byproduct. The ω-haloalkyldialkylalkoxysilane thus obtained is particularly useful as starting material for preparation of organosilicon compds. containing sulfur and having general formula R1OSiR2R3(CH2)3Sx(CH2)3SiR2R3OR1 by reaction of sulfurization on an alkaline metal polysulfide.

RX(2) OF 6 ...**C** + **E** ===> F...



C E F

YIELD 90%

RX(2) RCT C **10605-40-0**, E **64-17-5**
PRO F 13508-63-9
SOL 108-88-3 PhMe
CON 5 hours, reflux

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 3 OF 8 CASREACT COPYRIGHT 2006 ACS on STN
AN 139:22334 CASREACT
TI Method for obtaining bis(monoorganoxysilylpropyl) polysulfides
IN Guennouni, Nathalie; Pevere, Virginie; Vogin, Bernard
PA Rhodia Chimie, Fr.
SO PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DT Patent
LA French
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003048169	A1	20030612	WO 2002-FR4204	20021206
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK,				

MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

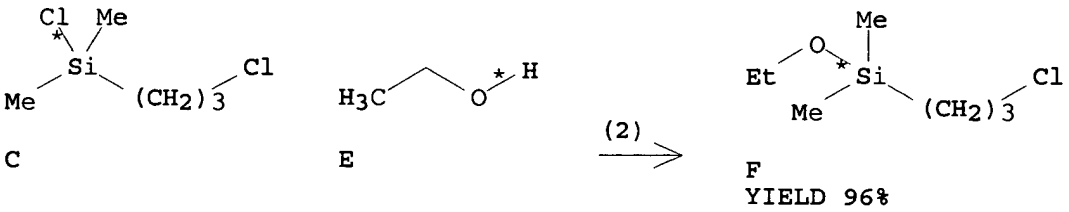
FR 2833264	A1	20030613	FR 2001-15768	20011206
FR 2833264	B1	20050819		
FR 2833265	A1	20030613	FR 2002-10145	20020809
FR 2833265	B1	20060210		
AU 2002364429	A1	20030617	AU 2002-364429	20021206
EP 1461344	A1	20040929	EP 2002-799785	20021206
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
JP 2005511700	T2	20050428	JP 2003-549359	20021206
EP 1621543	A1	20060201	EP 2005-21616	20021206
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, CY, TR, BG, CZ, EE, SK				

PRAI FR 2001-15768 20011206
FR 2002-10145 20020809
EP 2002-799785 20021206
WO 2002-FR4204 20021206

OS MARPAT 139:22334

AB The invention concerns the preparation of bis(monoorganooxysilylpropyl) polysulfides R1OSiR2R3(CH2)3-Sx-(CH2)3SiR2R3OR1 (I, R1 = C1-C15 alkyl, alkoxyalkyl; R2 and R3 = C1-C6 alkyl and/or phenyl; 1.5 ±.1 ≤ x ≤ 5 ±0.1). Said preparation is carried out by performing successively the following steps (a), (b) and (c): (a) hydrosilylation of the type: R2R3HSi-Hal + CH2:CH-CH2-Hal → Hal-R2R3Si-(CH2)3Hal; (b) alcoholysis of the type: Hal-R2R3Si-(CH2)3-Hal + R1OH → R1O-R2R3Si-(CH2)3Hal; (c) sulfidization of the type: R1O-R2R3Si-(CH2)3Hal + M2Sx → compound I; with Hal = halogen atom and M = alkali metal. Variations of the above reaction are also included in the invention. Thus, reaction of Me2HSiCl with CH2:CHCH2Cl in the presence of [Ir(COD)Cl]2 (COD = 1,5-cyclooctadiene) as catalyst afforded ClSiMe2(CH2)3Cl (85% yield), which reacted with ethanol to give EtOSiMe2(CH2)3Cl (96% yield). Finally, reaction of the latter with Na2S4 afforded bis(monoorganooxysilylpropyl) tetrasulfide, EtOSiMe2(CH2)3-S4-(CH2)3SiMe2OEt (87% yield).

RX(2) OF 6 ...**C** + **E** ===> F...



C E F

YIELD 96%

RX(2) RCT C **10605-40-0**

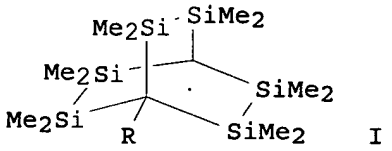
STAGE(1)

CON 150 deg C, 1 atm

STAGE(2)
RCT E **64-17-5**
CON 4.5 hours, 110 deg C, 1 atm

PRO F 13508-63-9
RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

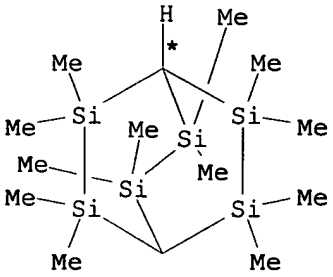
L18 ANSWER 4 OF 8 CASREACT COPYRIGHT 2006 ACS on STN
AN 134:56729 CASREACT
TI Synthesis and structures of polysilacage compounds containing a silicon-silicon inter-element linkage
AU Shimizu, Masaki; Hiyama, Tamejiro; Matsubara, Toshiaki; Yamabe, Tokio
CS Department of Material Chemistry, Graduate School of Engineering, Kyoto University, Kyoto, 606-8501, Japan
SO Journal of Organometallic Chemistry (2000), 611(1-2), 12-19
CODEN: JORCAI; ISSN: 0022-328X
PB Elsevier Science S.A.
DT Journal
LA English
GI



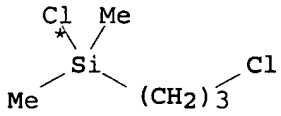
I

AB To explore the possibility of three-dimensional σ-conjugation originating from Si-Si inter-element linkages, 2,2,3,3,5,5,6,6,7,7,8,8-dodecamethyl-2,3,5,6,7,8-hexasilabicyclo[2.2.2]octane (1) (shown as I, R = H) was synthesized as a model compound The mol. structure of 1 was determined to be slightly distorted from an ideal bicyclo[2.2.2]octane skeleton by x-ray anal. Functionalization of 1 at bridgehead positions was achieved by treatment with superbase BuLi-t-BuOK followed by a reaction with an electrophile, e.g., the 1-monolithio derivative of 1 (I, R = Li) formed in situ from 1 and superbase (> 2 mol) underwent monosilylation with excess Me3SiCl in THF at -42° to give 96-98% yields of bridgehead monosilylated product (I, R = SiMe3). UV spectra of 1 and its derivs. demonstrated a bathochromic shift, particularly when dimensions of the mol. structure increased and a silyl or stannyl group was introduced at the bridgehead. This fact was understood in terms of three-dimensional σ-conjugation between Si-Si linkages. Ab initio theor. MO calcns. of model structures of the cage compds. were also described.

RX(6) OF 70 ...H + O ===> P

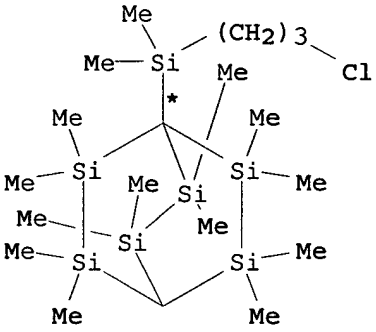


H



O

(6) →



P
YIELD 86%

RX(6) RCT H 218932-30-0

STAGE(1)
RGT D 109-72-8 BuLi, L **865-47-4** t-BuOK
SOL 109-99-9 THF

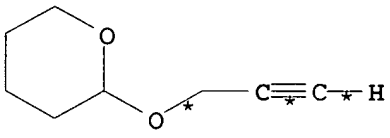
STAGE(2)
RCT O **10605-40-0**

PRO P 313473-17-5
NTE regioselective
RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

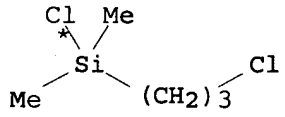
L18 ANSWER 5 OF 8 CASREACT COPYRIGHT 2006 ACS on STN
AN 134:5065 CASREACT
TI The Novel Silatecan 7-tert-Butyldimethylsilyl-10-hydroxycamptothecin Displays High Lipophilicity, Improved Human Blood Stability, and Potent Anticancer Activity
AU Bom, David; Curran, Dennis P.; Kruszewski, Stefan; Zimmer, Stephen G.; Strode, J. Thompson; Kohlhagen, Glenda; Du, Wu; Chavan, Ashok J.; Fraley, Kimberly A.; Bingcang, Alex L.; Latus, Lori J.; Pommier, Yves; Burke, Thomas G.
CS Department of Chemistry, University of Pittsburgh, Pittsburgh, PA,

15260, USA
SO Journal of Medicinal Chemistry (2000), 43(21), 3970-3980
CODEN: JMCMAR; ISSN: 0022-2623
PB American Chemical Society
DT Journal
LA English
AB The rational design and synthesis of B- and A,B-ring-modified camptothecins are described. The key α-hydroxy-δ-lactone pharmacophore in 7-tert-butyldimethylsilyl-10-hydroxycamptothecin (DB-67, I) displays superior stability in human blood when compared with clin. relevant camptothecin analogs. In human blood I displayed a t1/2 of 130 min and a percent lactone at equilibrium value of 30%. The tert-butyldimethylsilyl group renders the new agent 25-times more lipophilic than camptothecin, and I is readily incorporated, as its active lactone form, into cellular and liposomal bilayers. In addition, the dual 7-alkylsilyl and 10-hydroxy substitution in I enhances drug stability in the presence of human serum albumin. Thus, the net lipophilicity and the altered human serum albumin interactions together function to promote the enhanced blood stability. In vitro cytotoxicity assays using multiple different cell lines derived from eight distinct tumor types indicate that I is of comparable potency to camptothecin and 10-hydroxycamptothecin, as well as the FDA-approved camptothecin analogs topotecan and CPT-11. In addition, cell-free cleavage assays reveal that I is highly active and forms more stable top1 cleavage complexes than camptothecin or SN-38. The impressive blood stability and cytotoxicity profiles for I strongly suggest that it is an excellent candidate for addnl. in vivo pharmacol. and efficacy studies.

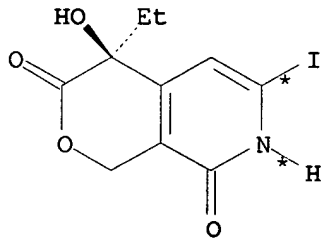
RX(38) OF 38 COMPOSED OF RX(2), RX(4), RX(6), RX(11), RX(12)
RX(38) A + H + O + AA ===> AJ



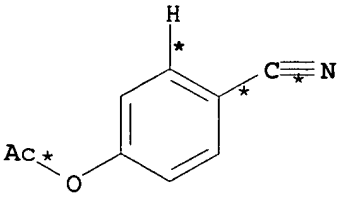
A



H

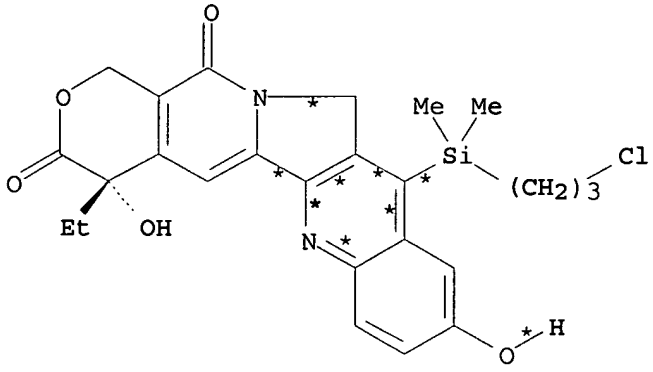


O



AA

5 STEPS



AJ
YIELD 44%

RX(2) RCT A 6089-04-9

STAGE(1)
RGT D 109-72-8 BuLi
SOL 109-99-9 THF

STAGE(2)
RCT H **10605-40-0**

STAGE(3)
RGT E 12125-02-9 NH4Cl
SOL 7732-18-5 Water

PRO I 307925-30-0

RX(4) RCT I 307925-30-0

STAGE(1)
RGT K 603-35-0 PPh3, L 7726-95-6 Br2
SOL 75-09-2 CH2Cl2

STAGE(2)
SOL 7732-18-5 Water

PRO N 220913-64-4

RX(6) RCT O 173442-34-7

STAGE(1)
RGT Q 7646-69-7 NaH
SOL 110-71-4 (CH2OMe)2, 68-12-2 DMF

STAGE(2)
RGT V 7447-41-8 LiCl

STAGE(3)
RCT N 220913-64-4

PRO U 220913-52-0

RX(11) RCT U 220913-52-0, AA 13031-41-9
RGT Y 661-69-8 Me3SnSnMe3
PRO AI 307925-31-1
SOL 71-43-2 Benzene
NTE photochem.

RX(12) RCT AI 307925-31-1

STAGE(1)
RGT AD **584-08-7** K2CO3
SOL 67-56-1 MeOH, 7732-18-5 Water

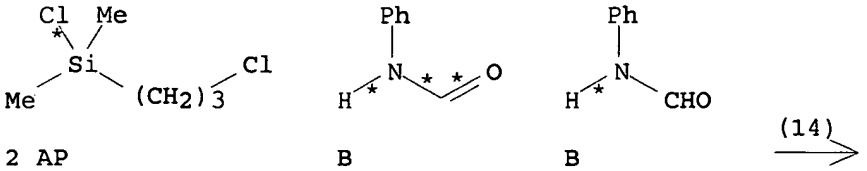
STAGE(2)
RGT AE 64-19-7 AcOH

STAGE(3)
RGT AF 7647-14-5 NaCl
SOL 7732-18-5 Water

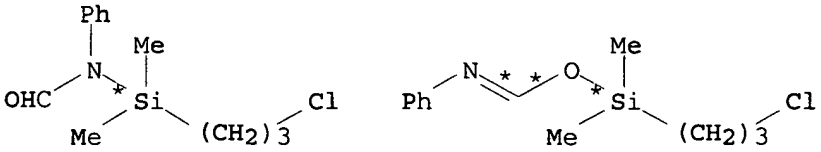
PRO AJ 302778-98-9
RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 6 OF 8 CASREACT COPYRIGHT 2006 ACS on STN
AN 112:217045 CASREACT
TI Synthesis, structure, and dynamics of (organosilyl) anilides
AU Otter, Julie C.; Adamson, Christine L.; Yoder, Claude H.; Rheingold, Arnold L.
CS Dep. Chem., Franklin and Marshall Coll., Lancaster, PA, 17604-3003, USA
SO Organometallics (1990), 9(5), 1557-62
CODEN: ORGND7; ISSN: 0276-7333
DT Journal
LA English
AB (Organosilyl)formanilides HCONPhSiR1R2R3 (R1R2R3 = Me2H, MePhH, Me3, Et3, Pr3, (i-Pr)3, Bu3, (OEt)3, (OSiMe3)3, Me2OMe, Me2Et, Me2CH:CH2, Me2-i-Pr, Me2C3H6Cl, Me2C2H4OAc, MeBu2, Me2Ph, Ph2-t-Bu) and (organosilyl)acetanilides CH3CON(p-R4C6H4)SiMe2H (R4 = OMe, H, Cl) were prepared by amination and transsilylation. Most of the (organosilyl)formanilides exist as rapidly equilibrating mixts. of amide and imidate tautomers and exhibit hindered rotation about the C-N bond in the amide tautomer. Bulky groups and alkoxy groups at silicon favor the imidate tautomer. The size of the silyl group has no effect on the barrier to either silyl tautomerism or hindered rotation, while electron-withdrawing alkoxy groups on the silicon lower both barriers. The effect of substituents on the rate of tautomerism is consistent with an intramol., concerted mechanism. The rotamer populations are relatively insensitive to variations in the silyl group. The more stable rotamer has the silyl moiety cis to the carbonyl. The (dimethylsilyl)acetanilides also exist as a dynamic mixture of amide and imidate tautomers. The attempted preparation of the SiMe2CHCl2 formanilide derivative led to substitution at carbon rather than silicon. The product, (HCONPh)2CHSiMe2Cl, was shown by x-ray crystallog. to have distorted trigonal-bipyramidal geometry at Si, with two nonequivalent dative bonds from carbonyl oxygen atoms to silicon.

RX(14) OF 24 2 **AP** + 2 **B** ===> AQ + AR



2 AP B B

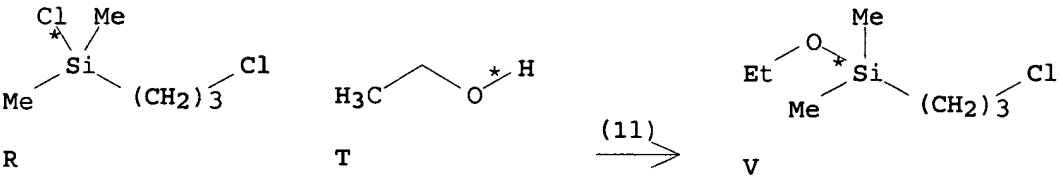


AQ AR

RX(14) RCT AP **10605-40-0**, B **103-70-8**
RGT E 121-44-8 Et3N
PRO AQ 126375-90-4, AR 126376-07-6
SOL 109-99-9 THF

L18 ANSWER 7 OF 8 CASREACT COPYRIGHT 2006 ACS on STN
AN 111:174221 CASREACT
TI Synthesis of siloxyphosphines
AU Urbaniak, W.; Marciniec, B.
CS Fac. Chem., A. Mickiewicz Univ., Poznan, 60-780, Pol.
SO Synthesis and Reactivity in Inorganic and Metal-Organic Chemistry (1988), 18(7), 695-703
CODEN: SRIMCN; ISSN: 0094-5714
DT Journal
LA English
AB Siloxyphosphines [Ph2P(CH2)nSiMe2]2O (n = 1, 3) were prepared by phosphidation of X(CH2)nSiMe2OEt (X = Br, n = 1; X = Cl, n = 3) with Ph2PLi followed by hydrolysis. Free-radical addition of Ph2PH to suitable vinylsiloxanes yielded (Ph2PCH2CH2SiMe2)2O and (Ph2PCH2CH2SiMe2O)2SiMeCH2CH2PPh2.

RX(11) OF 13 **R** + **T** ===> V

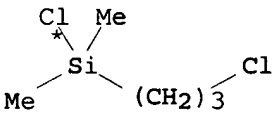


R T V

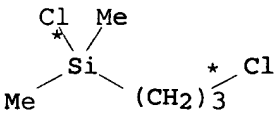
RX(11) RCT R **10605-40-0**, T **64-17-5**
PRO V 13508-63-9
NTE Petroleum ether solvent

L18 ANSWER 8 OF 8 CASREACT COPYRIGHT 2006 ACS on STN
AN 108:150547 CASREACT
TI Aminomercuration-demercuration of dimethyl(chloroalkyl)alkenylsilanes as a route to azasilacycloalkanes
AU Voronkov, M. G.; Kirpichenko, S. V.; Abrosimova, A. T.; Albanov, A. I.; Keiko, V. V.; Lavrent'ev, V. I.
CS Siberian Div., Inst. Org. Chem., Irkutsk, 664033, USSR
SO Journal of Organometallic Chemistry (1987), 326(2), 159-67
CODEN: JORCAI; ISSN: 0022-328X
DT Journal
LA English
AB 3,3-Dimethyl-1-phenyl-1-aza-3-silacyclopentane and 3,3,5-trimethyl-1-phenyl-1-aza-3-silacyclopentane were obtained by the reaction of dimethyl(chloromethyl)vinylsilane and dimethyl(chloromethyl)allylsilane with aniline in THF in the presence of mercury acetate followed by reduction with sodium borohydride. Aminomercuration-demercuration of dimethyl(3-chloropropyl)vinylsilane and dimethyl(3-chloropropyl)allylsilane results in the corresponding 3-chloropropylphenylaminoalkyl derivs. Dimethyl(3-chloropropyl)(2-phenylaminopropyl)silane undergoes cyclization under the same reaction conditions giving 2,4,4-trimethyl-1-phenyl-1-aza-4-silacycloheptane in low yield. Competitive nucleophilic substitution of the chloroalkyl group of initial silanes by aniline affords dimethyl(phenylaminoalkyl)alkenylsilanes.

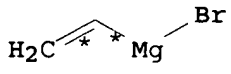
RX(16) OF 22 COMPOSED OF RX(2), RX(7)
RX(16) 2 D + 2 B + 2 H ===> R + S



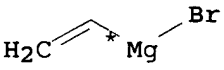
D



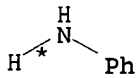
D



B

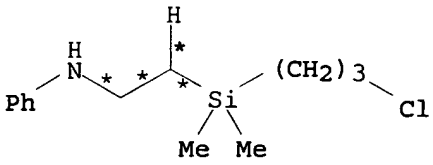


B

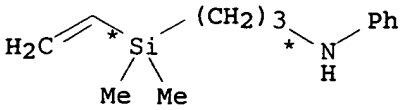


2 H

2 STEPS



R
YIELD 33%



S
YIELD 5%

RX(2) RCT D **10605-40-0**, B 1826-67-1
PRO E 88820-71-7

RX(7) RCT E 88820-71-7, H 62-53-3

STAGE(1)
RGT K **1600-27-7** Hg(OAc)2
SOL 109-99-9 THF

STAGE(2)
RGT L 1310-73-2 NaOH, N 16940-66-2 NaBH4

PRO R 113619-60-6, S 113619-61-7